THE
MEDICAL AND SURGICAL
REPORTER.

No. 2041. SATURDAY, APRIL 18, 1896. VOL. LXXIV—No. 16

ORIGINAL ARTICLES.

ALCOHOL IN DISEASE.

J. M. FRENCH, M.D., MILFORD, MASS.

In a previous paper I have endeavored to show by a consideration of the physiological action and clinical effects of alcohol as given by medical and scientific authorities, that this drug is in no true sense entitled to be called a stimulant, but that it is rather the opposite, a paralyzant and an anæsthetic. I now propose to consider its use in special diseases, such as shock, fevers, pneumonia, and diphtheria; since it is in conditions like these that alcohol has been almost universally recommended, and prescribed with an unsparing hand.

In conditions of *shock* and *collapse*, the use of alcoholics has been universal. Yet no less an authority than H. C. Wood, in a lecture before the Harvard Medical School Association, May 18, 1893, made use of these words: "When I was a student in the hospitals we used to have cases of shock in abundance, and we would pour alcohol into them and wonder that we got no more effect. It seemed like pouring alcohol into a rat-hole. *Alcohol is probably of no value whatever in shock:* indeed I am perfectly sure that a large dose of alcohol puts one nail in the coffin of the patient; and if you want your patients to come out of shock, you will be very careful in giving them alcohol. Alcohol stimulates the heart, but it paralyzes rather than stimulates the blood-vessels. It is under these circumstances that atropine becomes a remedy of great value. Give digitalis, if you please: it helps. Give strychnine: it helps. But the one remedy which we have, which will summon any power there may be in the vaso-motor centers into immediate action, is atropine."

Lawson Tait, the abdominal surgeon whose record of successful ovariotomies is a sufficient demonstration of his ability, when asked, "Do you never give your patients alcohol," replied, "Never, unless I know they are going to die, and then only to give them an easy death,"—thereby showing his appreciation of the anæsthetic properties of the drug. But if the abdominal surgeon has no need of alcohol, wherein is alcohol indispensable?

In *fevers* alcohol has been freely given, and the apparent justification of its use has been found in the improvement in the feelings of the patient. This point has been well met by Dr. Norman Kerr, one of the foremost of English physi-

cians, who says: "The chief peril of narcotic drugs has always appeared to me to lie in their disguising the real state of the patient from himself as well as from the doctor and his friends. If there is any serious ailment, such as cholera or fever, the sufferer may seem to be and may feel better. He is not better. He is actually worse—made worse by the alcohol, and not unseldom, after the evanescent alcoholic disguise and deceptive improvement has faded, it is found that the malady itself has been progressing, unseen and unsuspected from the delusive aspect of the alcohol, which might, in many cases, have been averted but for the true state of the patient having been completely masked."

Dr. A. L. Loomis, in the treatment of 600 cases of typhus fever on Blackwell's Island, in 1864, excluded alcohol altogether, with the result of reducing the death-rate to six per cent., whereas it had been twenty-two per cent. in the 908 cases which had been treated in Bellevue Hospital for three years previous.

Dr. N. S. Davis states that he has had charge of over 1,000 cases of typhoid fever in the leading public hospital of Chicago for thirty years previous to 1890, and has had a mortality of only five per cent.—about one-fourth the mortality reported in the principal hospitals of this country and Europe in which alcohol is freely used.

Says Dr. C. Newman, in *Food:* "Alcohol has been accorded a conspicuous place in the treatment of the low forms of fever. It is here, especially, that it is claimed to exercise that double function of 'food and physic,'—and this seems to be a fair exponent of the position taken by the great majority of the medical profession. But we are of the opinion that if there is one condition more than another that contraindicates the use of alcohol, it is the condition found in low fevers. By its anæsthetic influence on the nerve centres, and its union with the hemoglobin, it prevents that perfect change from venous to arterial blood which should be a guiding star in the treatment of such conditions."

In regard to the dosage in which alcoholic liquors should be given in these and similar cases, there is a general agreement, *in theory*, that small doses only are stimulant, while large ones are sedative. Thus a recent writer says: "Alcohol in *small* amounts *excites* and in *large* doses *depresses* both the peripheral motor and sensory nerves." Again: "In small amounts the drug stimulates the cerebral functions; it afterwards, especially in large quantities, depresses, and finally abolishes them." And again: "The drug in small quantities causes a rise in the arterial pressure by a direct action on the heart; in large amounts it depresses the arterial pressure similarly through a cardiac influence."

According to these doctrines, it is only in small doses that alcohol can possibly be of benefit—as a stimulant—in fevers and allied conditions. Now, while we are nowhere definitely informed as to what constitutes large and small doses, yet as surely as there is a general agreement in theory favoring small doses as the only rational use of the drug in these cases, just so surely is there a general agreement *in practice* among its users in favor of giving larger and larger and ever larger doses in proportion as the depression and consequent need of stimulation increases. Thus says one writer: "It may be that only a few ounces of brandy may be required to carry a patient through a critical period, or it may be that its free administration will be required to save life." In short, the weaker the heart and the greater the prostration of the patient, the larger are the doses of alcoholics given, and the more frequently they are administered. And that by the same men who, theoretically, agree that small doses *stimulate*, while large ones *depress*.

In *pneumonia* especially, the administration of large doses of alcohol in the form of whiskey or brandy is with many physicians a routine practice. In hospital practice also this is largely true. My observation has led me to believe that those physicians who are in the habit of treating cases in this manner usually meet with a death-rate above the average in this disease. Their own explanation of this fact would undoubtedly be that the cases were all severe ones. And so, indeed, they are, but in my judgment the treatment has much to do with making them so. In one instance,

in a large hospital, it was noticed that there was, for several years, a mortality five per cent. greater during those periods when the wards were in charge of an eminent physician who gave spirits freely in all cases of pneumonia as a matter of routine. The physician in question, upon having his attention called to these facts, was at first very skeptical, but finally consented to test the matter practically by giving up the use of alcohol in all cases of pneumonia for one year. During this time the mortality returned to the lower figure, convincing the skeptic and leading him to almost entirely abandon the use of alcohol as a food or medicine.

On this subject, so eminent an authority as Strumpel, in his text-book on the "Practice of Medicine," expresses himself as follows:—

"We have yet to make some remarks upon the very extensive use of large amounts of alcohol in pneumonia. Without doubt the free use of alcohol is necessary in drunkards, especially when delirium tremens is beginning, or is already pronounced. Since the withdrawal of any poison that is taken habitually, like nicotine or morphine, may excite the severest symptoms, the sudden withdrawal of alcohol from drunkards may have the worst results; while if we give an abundant supply of the stimulant to which the nervous system is accustomed, we sometimes succeed in avoiding the onset of severe nervous symptoms, like collapse and failure of the heart and respiration. It is quite a different thing with patients who, before their illness, have not been accustomed to take alcohol at all, or who took it only in small amounts. It may be true that in these cases small amounts of wine may have a stimulating and exciting action, although we could never satisfy ourselves of the often-praised influence of alchohol upon the action of the heart. We hold it, however, unjustifiable to force large amounts of alcohol indiscriminately upon every patient with pneumonia, often in spite of great resistance upon his part. Why should we expect sick people to bear doses of alcohol which have only bad results in healthy men unaccustomed to them?"

It is the dictum of Morris, in his "Essentials of the Practice of Medicine", that, "stimulants have done as much harm as the lancet in pneumonia."

The absurdity of much of the routine administration of alcoholics is seen at a glance when it is noted that they are often recommended to be given conjointly with strychnine and nux vomica—strict physiological antagonists!

In *diphtheria*, which is essentially a disease of depression, until a very recent date it has been the almost universal recommendation of our standard authors and text-books, to use alcohol in heroic doses. Repeatedly we are assured that the effect of the alcohol in these cases is spent in restoring the vital forces to par, or as an antagonist to the depressing influence of the disease, and that therefore it is impossible to produce intoxication in the patient, no matter how large doses are given. Personal observation has shown me the utter falsity of this claim. I have seen alcohol produce intoxication in diphtheria, but I have never seen it, in my judgment, either bring about, or tend to promote, a cure.

Fortunately, there is a reaction coming on in the treatment of this disease as well as others, and it is now not unusual to find high authorities opposing its use.

Dr. William F. Waugh, of Chicago, formerly editor of the Philadelphia *Medical Times and Register*, takes issue with a correspondent advising the use of alcohol in diphtheria. He says: "As I look back at my years of practice since I thoroughly comprehended the importance of antiseptic treatment in this disease, I fail to recall a case in which alcohol did not do more harm than good. Recently, I have not given it in any case of diphtheria proper. In laryngeal diphtheria or membranous croup, alcohol may act as a sedative, restraining a tendency to such exertion as will bring on paroxysms of strangling, but I prefer opium. However, the necessity for operation comes so soon, and is so urgent, that the space for sedatives is but slight. Of what use is alcohol in medicine? As a heart tonic, we have a better in digitalin; as a lung tonic, we have a vastly better in strychnine; as a food, we have a dozen better. Nitrite of amyl acts quicker. Atropine

warms one up better. Capsicum is a better remedy for collapse. What use is there for alcohol in which we cannot do better? To tide over a dangerous time, I would prefer to take my chances with iron, quinine and strychnine, concentrated food, and attention to hygiene."

Dr. Alonzo Bryan, in the *Physician and Surgeon*, declares his belief that it is in diphtheria that the most dire results from alcohol are observed. In that disease, he says, the vast majority of cases die by asthenia, or else by sudden failure of the heart. After picturing their condition, he adds: "Now in such a state of imminent danger, brought about by such causes, what could be worse than to administer an agent which notably reduces temperature, and at the same time enfeebles muscular power?"

Dr. N. S. Davis, after giving the details of a case of diphtheria from his note-book, sums up the case as follows, remarking that a more perfect clinical experiment for testing the effects both of the liberal use of alcohol and its entire disuse, could not well be devised: "A young man previously in good health, during the first two weeks of a fair attack of diphtheria, takes from twelve to sixteen ounces of whiskey per day, and at the end of that time has well-marked enteric typhoid symptoms, suppuration in the middle ear and one thigh, and so much feebleness of circulation as to have been thought twice to be dying. Then the whiskey is suddenly and entirely omitted, and instead of fatal collapse he soon begins to improve, and in one week is convalescent. Could there be any more direct or stronger clinical proof that the alcohol acted neither as a stimulant, a cardiac tonic, nor a conservator of tissue; but as a nerve paralyzer, an inhibitor of oxygenization and decarbonization of the blood, and a promoter of tissue degeneration and suppuration?"

In closing this paper, which claims only to be, in the main, a collection of opinions, I will call your attention to the following, from an editorial in the *Medical Record:*

"If one will take an unbiased survey of the position of medical knowledge and of medical men towards alcohol, and will compare it with that held by them fifteen years ago, we feel sure that he will see that the feeling against it is much stronger. This is because there has been a gradual accumulation of facts carefully ascertained and thoroughly proven, demonstrating the ill effects of the drug."

In the same line are these words of Dr. T. D. Crothers, of Hartford, editor of the *Journal of Inebriety:*

"Thoughtful observers recognize that alcohol as a medicine is rapidly becoming a thing of the past. Ten years ago leading medical men and text-books spoke of stimulants as essentials of many diseases, and defended their use with warmth and positiveness. To-day this is changed. Medical men seldom refer to spirits as remedies, and when they do, express great conservatism and caution. The text-books show the same change, though some dogmatic authors refuse to recognize the change of practice, and still cling to the idea of the food value of spirits.

"Medical men who doubt the value of spirits are no more considered fanatics or extremists, but as leaders along new and wider lines of research. Alcohol in medicine, except as a narcotic and anæsthetic, is rapidly falling into disfavor, and will soon be put aside and forgotten."

So well are my own conclusions expressed by the last two writers, that I feel that it is needless for me to say more.

"I wish you would put your name down for ten dollars to this subscription," said the lady to the poet.

"Certainly," he said. "I'll put it down for nothing." Then he wrote his name. "Keep your ten dollars, Mrs. Patkins," he added, as he blotted the signature, "I would not charge the charity for so slight a service."—*Harper's Bazar.*

He read that germs were in his food;
That microbes filled all clothing;
That water held a deadly brood,
So turned from it with loathing.
Bacilli, hid in beauty's lips,
Were wafted on each breath;
And, having scanned these various tips,
He gladly welcomed death.

San Francisco Exam.

GENITAL TUBERCULOSIS IN WOMEN.*

H. M. THOMPSON, M.D., WILMINGTON, DEL.

I have hesitated in presenting a paper upon a subject which I have had but meagre opportunities for investigating, particularly as my reports of cases are not complete pathologically. But as the great subject of tuberculosis is one not yet solved, each fact is of importance. Especially so, facts which throw any light, either as cause or consequence, upon that large class of diseases called by the rather unscientific name of pelvic inflammatory troubles. Each year as the pathological condition is better understood the classification of these diseases becomes more scientific.

The frequency of genital tuberculosis in women has only recently been brought to the attention of the profession, and many cases of salpingitis, and pyo-salpinx are now known to be of tubercular origin.

Dr. J. W. Williams, of Johns Hopkins Hospital, who I believe first called attention to this subject, says: "In our experience about 8 per cent. of all appendages removed for inflammatory disease are tuberculous; in other words, every twelfth case of adherent tubes and ovaries, or pus tubes, is of tubercular origin. Only 25 per cent. of these cases are recognized upon microscopic examination. The other 75 per cent. occur as 'unsuspected tuberculosis.'"

Other authorities, or at least other reliable reports of such cases, give a showing of 25 per cent., as tubercular in character.

Technically, genital tuberculosis may occur at any age, but generally between the twentieth and fortieth years. It is usually secondary to tuberculosis elsewhere, but in a considerable number of cases it is primary in character.

The order of frequency for the various portions of the genital tract is, tubes, uterus, ovaries, vagina, cervix and vulva.

Genital tuberculosis may be due to direct infection from without by contact, from any body contaminated by the germs, from instruments, etc.; or indirectly, from blood infection and infection from neighboring organs. Blood infection is without doubt the chiefest source.

The *symptoms* are not characteristic. Tuberculosis appears to affect the pelvic organs by setting up a low grade of chronic inflammation, with sometimes the formation of abscesses.

In the great majority of cases, genital tuberculosis commences in the *Fallopian tube*, near or at the fimbriated extremity. In nearly all advanced cases the uterus, ovaries, or peritoneum, one or all, are likewise affected. Tuberculosis of the tubes may be primary, but as a rule it is secondary to peritoneal or intestinal, or a part of general tuberculosis.

Tubal tuberculosis begins by a deposit of miliary tubercles immediately underneath the epithelium. These may be spread over the entire mucous membrane, undergo caseation and infiltrate the muscular wall.

Primary cases can only be diagnosed by the discovery of tubercle bacilli in the secretions, or by the microscopical examination of the debris obtained by curetting the uterus. The co-existence of tubo-ovarian masses with phthisis or tubercular peritonitis should at once arouse suspicion as to the tuberculous nature of the infection. It must be remembered that the tubercle bacillus cannot always be found miscroscopically even in advanced cases.

Professor Werth, in an essay before the German Gynecological Society in 1889, cites one case in which giant cells were found, but no tubercle bacilli could be demonstrated in the contents or in the wall of a tuberculous tube. In a second case bacilli were found both in the contents of the tube and in nodules of the peritoneum.

In a case, reported by Osler in the *Johns Hopkins Hospital Reports*, operated upon by Halsted with recovery, bacilli were found in the old quiescent nodules

*Read before the Delaware State Medical Society, 1895.

several months later, after death from an intercurrent disease.

Dr. Howard A. Kelly, in 1890, reported the anomaly of a tubercular peritonitis complicating ovarian cystoma, the tubercles being scattered over tubes, broad ligaments, abdominal peritoneum, and on the surface of the ovarian tumor. Two or three other cases in which this complication has occurred have been reported, one in the practice of Sir Spencer Wells. In the case of Dr. Kelly's, the tubercle bacillus was found in the microscopic section after a prolonged search. The same difficulty in finding the bacillus is referred to in a series of cases reported by Dr. Charles B. Penrose in the *American Journal of Medical Sciences*, November 1894. Two of Dr. Penrose's cases were of the class known as chronic fibroid tuberculosis of the tube.

This class Williams describes as follows: "It differs from the other forms of tuberculosis in the excessive formation of fibrous tissue in and between the tubercles. There may or may not be accompanying inflammatory changes, the main change consisting in the excessive development of fibrous tissue, both within and without the tubercles, and the relative absence of caseation. The marked feature of this form of tuberculosis appears to be its chronicity."

I saw a case of this kind operated upon by Dr. Kelly about a year ago, in which the tuberculous character of the disease was manifest as soon as the abdomen was opened, from the presence of the tubercles upon the peritoneum of the tubes, uterus, intestines, etc.

My first case, where tuberculosis of the lungs was *associated* with pelvic disease, was early in my practice, in December, 1885. The patient was a respectable unmarried woman from the country, aged thirty. She had been subject to pelvic inflammatory attacks for about five years, and was a constant sufferer during the intermissions. At this time the uterus was enlarged and retroverted, and upon each side and behind the uterus were sensitive masses. In order to give her the best chance for rest and treatment, I sent her to the Woman's Hospital in Philadelphia. She remained there under local and rest treatment for nearly three months, and returned improved in health. During the following year she had two or three profuse uterine hemorrhages and slight attacks of peritonitis. Somewhat over a year from the time she left the Hospital, she had a severe attack of peritonitis from which she nearly lost her life. She did not rally from this as before, and afterward had an afternoon rise of temperature continuously. About this time we were beginning to be alive upon the subject of pus tubes, ovarian abscesses, etc., and I thought my case answered the description of suppurative disease. I took her to Dr. Kelly, who was then at Kensington Hospital. He diagnosed her case ovarian abscess. At this time there was dullness in the apex of one lung, and slight cough, but otherwise her physical condition was excellent.

Dr. Kelly operated upon this case a few weeks afterward, early in the year 1888. Her condition in the pelvis was one of the worst. One ovary was completely disorganized; the other, the size of a lemon, was filled with pus, as were the tubes. The adhesions were many and dense. During the first two weeks after operation she did well, but about this time a fecal fistula occurred or was recognized. This failed to heal, and later the abdominal wound suppurated. She failed from this time, and a month afterward the lungs commenced to break down, with general emaciation and other hectic symptoms. She died in her home in the country, about four months after the operation, of general tuberculosis.

This case, so far as I was able to learn, had no tubercular antecedents. Neither had she a history of septic or of specific infection. Very recently I inquired of Dr. Kelly about this case. He said: "I regret that I cannot tell you whether it was tubercular or not. In those days the diagnosis of tubercular salpingitis was not made where the tubercles were not found macroscopically." Whatever may have been the origin, the disease was undoubtedly *primary* in the *genital organs*. This was the kind of case never to be forgotten, showing so emphatically as it did, the dangers of delay in such cases.

In January, 1894, I was consulted in two *similar*, and both *typical*, cases of sal-

pingitis, both of whom died in a year or more of pulmonary tuberculosis. One removed to the country soon after my second visit and I did not have charge of her. In the case of this patient there was a history of a miscarriage previous to the tubal disease.

The other patient I attended for four or five months. She had always been frail and was tubercular in appearance. Her mother died of catarrhal pneumonia or acute tuberculosis. The patient was twenty-seven years of age, married two years, no children. She suffered from pain in the ovarian region before marriage, and about three months after marriage had an attack of pelvic pain, fever, etc., which was called inflammation of the bowels. Another, later, was diagnosed as typhoid fever. She had also been treated for endometritis, cystitis, and so on. I was called to attend her in an attack of this kind. The case was easy of diagnosis. An elongated tumor, sensitive and adherent, was readily distinguished in a mass of recent exudation which fixed all the organs. There was no fluctuation at any point, similar to the pus case described above. Excessive tympanites was present; and besides general abdominal tenderness, a small indurated mass existed in the lower abdomen. The general symptoms —gradual loss of weight, strength and appetite, disordered menstruation, night-sweats, etc.,—gave us almost a hopeless case in the beginning. As soon as she recovered from the acute attack I took her to Dr. Anna E. Broomall for consultation. She diagnosed the case salpingitis, in all probability tubercular.

There was slight induration in one lung at this time, but no other physical signs of pulmonary tuberculosis. One examination of the sputum at the Hospital gave negative results. Dr. Broomall advised measures to improve the general health, deferring the question of operation. Under rest, forced feeding and treatment with hot abdominal packs, the mass in the abdomen disappeared. The afternoon rise of temperature, which she had now nearly all the time, subsided for about two weeks, appetite and strength improved, and she gained five pounds in weight in three weeks while in bed. About a week after she got about, returning from a drive, she had another sharp attack of peritonitis which lasted about forty-eight hours. This did not affect her generally, and to all appearances she was better than for several months. I was most anxious at this time to have another opinion in regard to operation in her case. She objected to this, and finally decided to try another method of treatment. I did not see her afterward, but learned that she commenced to fail rapidly in the early autumn, and died in the winter of general tuberculosis. This also was a most instructive and interesting case in all its features.

The next case of interest which I will class as tubercular, has a clinical history as follows: Mrs. C. came to our dispensary in the Delaware Hospital early in November, 1894. She was a married woman, thirty years of age, mother of two small children. Her only complaint was complete prolapsus of the uterus, but she thought her "stomach was getting larger." Her general health was poor, she was spare and anæmic, and had a hacking cough which she said had existed from childhood. Upon a thorough bi-manual examination, I found the abdominal walls pendulous and apparently thickened, but there was nothing present at this time of the nature of fluid, a tumor, or a cyst. The ovaries, tubes and uterus were not apparently diseased, otherwise than a chronic enlargement of the latter. She objected to a perineal operation for the relief of the prolapsus, so we made a trial of packing and pessaries to her temporary relief.

I did not see her again for about two months. I was then called to her home as she was unable to visit the dispensary. I found her very ill, suffering from abdominal pain, vomiting, diarrhœa, with an afternoon temperature of 101° to 102°. She was also losing flesh and strength rapidly. What was most astonishing was an abdominal enlargement about the size of an ordinary eight months' pregnancy, which did not exist two months previous. She said the enlargement came on or increased rather suddenly. It was rounded in outline like an ovarian cyst, but not so firm. It was sensitive to touch and varied slightly in dimensions from time to time. She said she had been within two weeks

to other physicians and to another dispensary, and they all told her she had a water tumor. In about two weeks she had improved sufficiently to be taken to the Woman's Hospital in Philadelphia. This was about the middle of January, 1895. At the hospital, on account of her cough and other suspicious symptoms, examination of the sputum was made upon two occasions and the tubercle bacilli found present. The physicians were agreed to the diagnosis of tubercular peritonitis, probably encysted, but subject to exploration. The operation was postponed, to my great regret, from time to time, probably on account of her poor condition. At the expiration of five weeks in the hospital, she was allowed to return home for a visit.

I have not since been able to see or to communicate with her, as her home is in the lower part of the State. I have not, however, abandoned the idea of making another effort to save this patient and to confirm or correct the diagnosis. I learn that her general condition is improved, and that her disease, under the influence of country air, rest and tonics, is quiescent.

What promise does operation offer in tubercular diseases of the genital organs similar to those we have reported? In the first place, an early diagnosis is most important if we are to hope for successful results from operation. In cases of primary tuberculosis of the tubes, when such can be diagnosed, they should be removed. When the disease is associated with tuberculosis elsewhere, except in the ovary or the peritoneum, our best authorities agree, I think, that the operation should only be performed in cases in which the complicating conditions are quiescent and the general condition of the patient good.

Statistics from various hospitals and from private sources report many of these cases as *cured*. In our own Alumnæ Association, last year, Dr. Jacobi, of New York, Dr. Keller, of Boston, and Drs. Fullerton and Werner, of Philadelphia, reported successful operations upon such cases in bad tubercular condition. Some of these, after four or five years, were still in good health. Dr. J. W. Williams, in the *Johns Hopkins Hospital Reports*, says: "In our cases the results have not been unsatisfactory. Those who have been heard from were greatly improved, if not cured.

"In a few cases the women have been perfectly well four and five years after the operation."

The above results, and many additional which might be given, certainly afford encouragement sufficient to advocate operative treatment, though, no doubt, all of these cases were operated upon too recently to justify any definite statement as to their ultimate recovery.

Dr. Howard A. Kelly says: "A peculiar interest attaches to cases of tubercular infection of the peritoneum, on account of the rapidity with which these patients often make a complete recovery after a simple exploratory incision, with or without drainage, and with or without the removal of some principal focus of the disease, such as a tuberculous Fallopian tube."

The benefits that have almost universally attended celiotomy in tuberculous peritonitis is one of the surgical surprises of recent times. Just how opening the abdominal cavity benefits this condition is not positively known, though many explanations have been offered. Instead of the general peritoneum becoming infected, the healthy membrane appears to help in curing the diseased portions. Even in cases of caseous tuberculosis of the peritoneum, the good results of abdominal section are sometimes surprising.

Almost the earliest recorded case of tubercular peritonitis operated upon was that of Sir Spencer Wells, in 1862. The patient, an unmarried lady, presented an abdomen distended to the size of a full term pregnancy. A cyst was suspected, but instead there was ascites, and the peritoneum was found studded with myriads of tubercles. The woman recovered, and it is reported that she is now, after more than thirty years, in perfect health.

In concluding this brief consideration of our subject, I must express my conviction that the responsibility of the *general practitioner* in diseases of women, and especially in those so insidious in their character as that of tubercular infection, is not sufficiently considered.

It is not the question of whether we individually believe in operations or

whether we do not; it is the question of our *duty to our patients.*

No physician is worthy of the name, who allows a patient to suffer with attack after attack of pelvic peritonitis without even attempting a diagnosis. I occasionally meet with patients who have been going from physician to physician for ten or fifteen years, with the condition unrecognized. The careless and superficial method of practice fails utterly in these cases.

First of all let us agree that we must make a diagnosis as complete as the means at our command can give us; then treat these cases as nearly scientifically as we can, whether it be by local, medicinal, surgical, or a combination of treatment.

We cannot all be gynecologists, much less gynecological surgeons, but it is time we understood just where our work begins in these cases, and where it ends.

I would be the last to advocate the removal of important if not vital organs, except they are irremediably diseased. But when such is the case beyond a doubt, palliative treatment (or what is worse, simple neglect) is not scientific, if it is even honest practice. The gynecological surgeon is frequently criticised because of imperfect results, when in not a few instances the fault lies with the general practitioner. The results are remarkable in a large number of cases which reach them at death's door —large fibroids bound down from repeated attacks of inflammation, pus tubes and ovarian abscesses of long standing. Again indifferent results may often be converted into successful issue by a little judicious after-attention upon the part of the family physician or surgeon for a year or more after operation; for we need to bear in mind always that an operation is only a step on the road to health.

The *prevention* of the diseases of women, the *causes* of which even the humblest in our dispensaries are earnestly inquiring, is an important and interesting question. I do not mean direct prophylaxis which rests largely with practitioners of obstetrics and minor gynecology — the necessity of which can scarcely be overrated. Preventive medicine for women means more than these precautions. It means measures for the improvement of their health and stamina. This question embraces all our social relations, our habits of life, our educational methods, and many other considerations. Sooner or later this subject will demand the earnest attention and coöperation of intelligent men and women, both in and out of the profession. For the furtherance of these great objects and the advancement of our profession along the best lines, the medical practitioners of the city of Wilmington need to take higher ground. It may be physicians here are lacking somewhat in the true scientific spirit, but over and above all, we need true fellowship, harmonious pulling together, and courteous respect in intercourse with each other as members of a liberal profession.

Rudolph (*Centralbl. f. inn. Med.*, February 1, 1896) relates two cases with syphilitic manifestations in which an accidental erysipelas occurred: (1) A man, aged 52, had two syphilitic ulcers on the face. The erysipelas affected both sides of the face. Five days after the defervescence and nine days after the onset of the erysipelas the ulcers were healed. (2) A woman, aged 25, contracted syphilis five years previously. She now had severe headache, and paresis of the left side of the face, with occasional clonic spasm. In addition there were enlarged submaxillary glands and a chronic arthritis affecting both knees. Syphilitic cachexia was marked. She had been through several courses of antisyphilitic treatment, including mercurial injections and inunction. After an attack of erysipelas the patient was cured of her chronic syphilis. The glands went down, the pains in the head and joints disappeared, and the facial paralysis gradually recovered. For a year she remained free of any syphilitic manifestation, when a gumma appeared in the leg. The patient would not submit to further antisyphilitic treatment. The rapid and beneficial effect brought about by the erysipelas in these cases was striking. Unfortunately the first case was not seen again, and so it could not be stated whether he remained free of relapse. In the second case the cure was not permanent, but the erysipelas had more effect on the disease than the antisyphilitic treatment.

NOVEL TREATMENT OF ECZEMA.

EDWARD HORGAN, M.D., PHILADELPHIA.

It is pretty generally acknowledged that there is nothing in the whole domain of medicine more rebellious to treatment than are skin troubles at times. They refuse to yield to medication, to diet, and apparently to everything, to the annoyance of the patient and the exasperation and thorough disgust of the doctor. And just as anxious as they are to wreck the reputation of drugs, much more so are they often to conceal their immediate or remote cause. So it is then that the physician tries this lotion, that salve, that drug internally, all without avail, until the patient eventually wearies, loses faith in his medical adviser, and drifts off to some, supposedly, more skillful practitioner.

It was with a history somewhat akin to the above, that a most interesting case came to me not quite one year ago. The patient was a sea captain. He was a well preserved, robust fellow of middle age, and complained of having had sore feet for nearly twenty months. He "had tried everything", as he put it, and nothing gave him any relief save a pair of old russet leather shoes, which he at times wore. Questioning him and finding that his digestive apparatus was not disarranged, that his diet was simple and of a character easily assimilated, and that he was not afflicted with any constitutional ailment, I examined his feet and found there typical lesions of eczema rubrum. Those members were much swollen and infiltrated, and the surface red, raw and ugly looking in the extreme. There was much weeping, while the itching and burning were most annoying. I was naturally interested and curious regarding the relief provided by the russet shoes, and questioned him minutely regarding them. He declared that they were the same size as his black shoes, having been made on the identical lasts and by the same shoemaker, and were about an age with the black shoes. Nevertheless, he said the black footwear always aggravated the eczema, while the use of the russets brought comparative comfort and an amelioration of all the symptoms.

I very naturally imagined therefrom that the virtue lay in the russet leather; but whether it be invested in the color, the russet being lighter attracting less heat thereby keeping the foot cooler, or whether it be due to a difference in the process of tanning, or something else, I could only conjecture.

However, after explaining to my patient that his case was unique, at least in my experience, I obtained his consent to experiment with him and put the russet to a systematic test, leaving it do the work uninfluenced by medicine of any sort. With a view of removing any palliating feature there might be in the old shoes, on account of their having been "broken in", or for some other reason peculiar to them and to them alone, I ordered him to procure a pair of new russet shoes and after wearing them for one month, meanwhile doing his usual amount of work and walking, to call on me. He returned as instructed and reported that his feet were improved, and their appearance bore out the statement. Much of the weeping had ceased, the swelling wonderfully subsided, the infiltration was less, and the general look indicative of rapid strides in the direction of a cure. I was still reluctant to assign the credit to the leather although everything indicated that to do otherwise would be a digression from the realm of justice. I again abstained from prescribing medicine, and ordered him to wear the shoes for three weeks longer, note the effect, and then, after giving the black shoes a turn of one week, to return to me. He did as instructed with the usual result *i. e.*, that under the use of the russet leather the eczema continued to improve while the black shoes rekindled the trouble.

I deducted from these tests that the curative properties were in the tan or russet leather, and, acting under this supposition, I advised the captain to wear

none but russets and to report at my office at intervals of one month.

At each visit his feet seemed better than they were the month before and at the end of eight months I discharged him perfectly well, advising him though, to continue wearing russets, lest the trouble recur.

Since dismissing the case I have interviewed a skilled leather worker only to find that there is little difference in the tanning of the two leathers. With the russet more chemicals are used with the object of producing a clean, smooth, colored surface and the effect of closing up the pores, thereby retarding, rather than aiding, the passage of air through the leather to the foot.

COMMUNICATIONS.

THE FIRST FIVE-DAY EXPERIMENT WITH A RESPIRATION CALORIMETER.

OLIN FREEMAN TOWER, PH.D.,* MIDDLETOWN, CONN.

The respiration calorimeter at Middletown, Conn., designed by Professors Atwater and Rosa, of Wesleyan University, has been in process of construction and development for the last three years. It has this winter been perfected so as to render accurate experiments with it possible. A Swede, janitor of the laboratory, has been used from time to time for trial experiments of a day or so; but when it became possible (and, in fact, almost necessary, to insure accuracy) to make runs of a longer period than two days the Swede objected, and volunteers on the force were called for to give the apparatus a fair test experiment running over a period of from five to ten days. Mr. A. W. Smith and myself offered our services. It fell to me to make the initial trial, and the date of my entering the calorimeter was fixed for March 16.

The object of a respiration calorimeter in general is to offer a means of determining the respiratory products of the lungs and the heat given off by the body of the animal or man experimented upon. Pettenkofer, a German, was the first to try a respiration calorimeter. He experimented with animals. His analyses of respiratory products were more or less inaccurate, and, as far as measuring heat was concerned, only the grossest approximation was obtainable. The apparatus in Middletown is the first to render possible accurate determinations of respiratory products, carbonic acid gas and water, on a large scale, and to afford anything like accuracy in the measurements of radiant heat from human beings. The appliances for measuring the heat are electrical, and the greatest delicacy of registration has been attained. With this apparatus it is designed to determine the heat given off when a man rests, works mentally, and works physically. But all these things are only steps leading up to the great principle of the conservation of energy in the physiological world. This has long been assumed, but has never been definitely proved. In order, however, to accomplish anything definite in this line, the whole income and outgo of the body must be known. In other words, a digestion experiment must be made, together with a calorimetric experiment—that is, a given amount of food is given a man; this food has a definite heat value or a definite amount of potential energy. By taking account of the waste products and their heat values, and the heat radiated by the individual, we see whether this is equal to the heat value of the original food. This appears easy, but a good many factors hard to estimate come in—for example, the storing of food in the body as

*Assistant Chemist, Agricultural Experiment Station, Wesleyan University.

muscle, fat, etc.—which complicate the case very considerably.

Four days before I entered the calorimeter I began to live on a particular diet, which I kept up without change till I came out. The diet chosen and maintained from first to last was:

Breakfast—Apples, three ounces; two eggs, six ounces; potatoes, five ounces; bread, two and one half ounces; butter, one third of an ounce; coffee, two thirds of a pint; milk, one fifth of a pint; and sugar, three quarters of an ounce.

Dinner—Beefsteak, Hamburger style, made into thick balls and broiled, four and one half ounces; potatoes, four and three quarter ounces (plain mashed); bread, two and one half ounces; butter, one third of an ounce; tea or coffee, two fifths of a quart; milk, two ounces; sugar, three quarters of an ounce; and canned pears or peaches, five ounces.

Supper—Peaches, seven ounces; milk, one pint; sugar, one third of an ounce (on the fruit); and bread, two and one half ounces.

From this another interesting phase of the subject presents itself. Different diets can be administered from time to time, and different sorts of labor can be done by the person experimented upon, to see which is the most efficient and economical diet for a certain kind of work. The solving of this problem will inaugurate a new era in economic progress.

I entered the calorimeter about 10.30 A. M. March 16 through the one aperture, a window, and the glass of the window was puttied in tightly behind me. With me I took a cot bed, a chair, table, some cushions, rugs, and books. The only means of getting anything in to me was through a brass cylinder about eight inches in diameter. This was closed ordinarily at both ends. To pass anything in the outer cap was removed, the material placed in the cylinder, and the cap replaced. I then removed the inner cap and took out whatever was there. Everything I ate had to come in this way.

From the one window I received plenty of light to read and work by. In the evening an electric light was hung directly against the window outside, which gave even better light than daylight. I busied myself reading, writing, and working on some calculations I had on hand. By keeping busy I didn't mind the confinement at all. For exercise I would walk about the box, which has about thirty square feet area, run back and forth, and go through various movements with my legs and arms. Sometimes mornings my head would feel rather dull, but it would always pass away after breakfast. A constant stream of air was supplied me, which was analyzed as it went in and came out. The air seemed to keep very good. The dullness in my head on arising I ascribed to the slight shaking of the calorimeter caused by a motor in the room. I slept well, my appetite kept up on my monotonous diet, and on coming out on March 21 I found I had gained two pounds.

The experiment was a success in showing that a person can remain in the calorimeter with perfect security, and, so long as he keeps busy contentedly, for a considerable period of time. Further results have not as yet been worked out, but everything seems to indicate that it was a success in every way.

Mr. A. W. Smith went in on Monday, March 23, and expects to stay ten days or more. Mr. Smith is a graduate of Dartmouth, Class of '93. He spent his next year studying physics at Cornell, and has since been connected with this calorimeter here in Middletown. His diet varies somewhat from mine. He has oatmeal and beans for breakfast, no canned fruit at all, and Boston brown bread and milk for supper. The dinners are about the same. He seems to be doing well, and has not as yet expressed a desire to come out.

No use waitin' fer the wagon,
  Loafin' life away!
Corn needs hoein',
Keep a-goin',
  Meet it on the way!

No use waitin' fer the wagon,
  Life is but a day;
Time is lackin',
Hay needs stackin',
  Meet it on the way!

No use waitin' fer the wagon,
  Hair is growing gray;
Storm-winds hummin',
Night is comin',
  Meet it on the way!

—Chicago *Times-Herald.*

STATISTICS OF ANÆSTHESIA.*

The first Congress of the Scandinavian Society of Surgeons held in Gothenburg in 1893, prescribed as one of its objects the collection of statistics of anæsthesia by its members. Their researches have furnished the following results:

There are reported from March 1, 1894 to March 1, 1895, from Sweden, Norway, Denmark and Finland, 15,052 anæsthesias. Of these 11,284 were with chloroform; 1,279 with ether; 2,122 with mixtures of chloroform and ether; 362 with ethyl bromide; and five with chloroform and ethyl bromide.

The administration of chloroform has been by drops, by large doses, with preparatory injections of morphia, without morphia, after the administration of cocaine by the mouth, and with preparatory introduction of cocaine by the nares. The difference observed between the administration of chloroform by drops, or by large quantity was insignificant.

Morbid symptoms were observed during and after narcosis as noted.

Vomiting *during* the anæsthesia occurred as follows:

Ether, without injection of morphia	14%
" with injection of morphia	25%
" and chloroform without morphia	13.5%
" and chloroform with morphia	18.1%
Chloroform by drops without morphia	10.5%
" in large doses with morphia	14.8%
" with cocaine in the nares	13.6%
Bromo ethyl	10.77%

Asphyxia during narcosis was as follows:

Chloroform with cocaine by nares	3%
" in large doses with morphia	1.7%
" " without morphia	1.3%
" by drops without morphia	1.03%
" and ether with morphia	18.1%
" " without morphia	0.96%
Ether without morphia	0.79%

Syncope has been observed as follows:

Ether without morphia	0.08%
" and chloroform without morphia	0.58%
Chloroform by drops without morphia	0.4%
" in large doses without morphia	0.2%

Asphyxia has been observed in 139 cases; syncope in fifty-two cases. There were five deaths during chloroform narcoses; one in 2,257 cases.

Vomiting *after* narcosis was observed in the following proportions:

Ether with morphia	25%
" without morphia	24%
" with morphia and atropine	8%
" and chloroform without morphia	26.6%
" " " by drops, without morphia	20%
Chloroform by drops with morphia	6.15%
" " " injection of cocaine in nares	42%
Chloroform by large doses without morphia	57%
" " " with morphia	40%
" with cocaine by mouth	2.6%
Bromo ethyl	1.1%

Jaundice followed chloroform narcosis in ten cases.

Somnolence was long continued in fifty-eight cases.

Albuminuria has been observed 128 times, but was not confined to either agent.

There were thirty-six cases of pulmonary affections after narcosis.

There were forty-three cases of feebleness of the heart and collapse after narcosis, as follows:

Chloroform in large doses without morphia	.39%
" by drops without morphia	.32%
" and ether without morphia	.51%
Ether without morphia	.15%

Eighteen deaths following and to a certain extent attributable to the narcosis occurred as follows:

Chloroform in drops with morphia, 2 cases	2%
" by drops without " 8 "	.08%
" in large doses wihout morphia, 2 cases	.18%
Chloroform and ether without morphia, 4 cases	.25%
Ether without morphia, 2 cases	.15%

Hospital Physician Enydahl states that he has not had time to make a tabulated report. He is in favor of ether, and says that the reason why it sometimes does not work well is that the ether of the shops is not pure. It must be absolutely pure. He uses Shiring's. He has administered ether (always without morphia) in at least 2,000 cases, and has never had a death.

He gives it always fasting, or after a cup of tea. Always drops it on a sponge in a napkin and brings it gradually and not smotheringly over the face. He has never had any serious complications of

*Translated and collated from the Northern Archives of Medicine for 1894-5, by Horace Burr, M.D.

the respiratory organs. Sometimes, if the patient coughs badly, he changes to chloroform, after which the patient will take ether well, but he never prefaces ether with chloroform, as some patients will die at the very commencement of chloroform inhalation. He attributes his great success to the absolute purity of his ether.

He says that if, in using chloroform, the patient breathes very heavily, a change to ether will make it lighter, etc.

CURRENT LITERATURE CONDENSED.

Syphilis from an Insurance Point of View.[1]

When the question of life assurance association with a syphilitic history comes up for consideration, there is often displayed such a variety and vagueness of opinion that injustice is often done and loss inflicted both on the companies and the individual whose life has been proposed for insurance.

Statistical investigation does not offer much assistance in establishing a proper estimate of this question, inasmuch as in the mortality returns other ailments are mixed up with syphilis, and deaths due doubtless to this cause are placed under other categories. The knowledge which can guide us must be clinical.

After these preliminary statements, I would be inclined to classify for insurance purposes all syphilitics under the three following groups: 1. If a man has been properly treated, the probabilities are that, if of good constitution and habits, he will go through life with scarcely more appreciable risk than one who has never had the disease. 2. If the applicant has not undergone a sufficient course of treatment and applies for insurance before the expiration of six years, and yet is not suffering from any tertiary manifestations and is otherwise satisfactory, the chances are that he may escape the malign form; but ten per cent. extra should be charged until the expiration of six years, and then the case reconsidered. 3. When tertiary symptoms have developed, the case should be absolutely declined, because, while treatment may temporarily remove these, it cannot eradicate the tendency to recurrence, and clinical observation has shown that those so affected rarely live beyond a term of ten years, and often much less where palliative treatment is wanting. While my personal experience is almost absolutely favorable regarding the prognosis of the cases included in class 1, it is questionable, when the cases are looked at with the interests of the officers perfectly safeguarded, if they should not practically be treated in the same way as those in class 2.

[1] P. H. Maclaren, M.D., *Edinburgh Medical Journal*, March, 1896.

Notes on Syphilis. Extra Genital Chancres.[2]

As is well known, there is a tradition or belief in the profession that extra genital chancres are not only more apt to be severe in their local processes, but more liable to be followed by a grave syphilis. The pain of chancres of the fingers is readily explicable from the character of the tissues involved, the structures being compact, dense and resisting, and the nail bed endowed with the most exquisite sensibility. Again, it is subject to pressure, painful contacts and knocks, besides being exposed to infection from pyogenic germs. Likewise chancres of the lips, tongue and pharynx are exposed to irritation by food and drink, while the movement of the parts in talking and swallowing interferes with prompt healing. From my observation, however, the resulting syphilis is not more severe than the average run of cases.

Prof. Fournier in a recent lecture, has carefully analyzed the subject. Starting with the proposition that statistics show ninety-three per cent. of chancres to be genital and seven per cent. extra genital, he has considered the criteria upon which the gravity of syphilis may be based, as follows: 1. *The occurrence of*

[2] Prince A. Morrow, M.D., *Journal of Cutaneous and Genito-Urinary Diseases*, April, 1896.

tertiary accidents. In twelve hundred cases of tertiary syphilis he found six or seven per cent. originated in extra genital chancres and ninety-three or ninety-four per cent. in genital sores. 2. *Malignant precocious syphilis.* Genital chancres were responsible for ninety-two per cent., and extra genital chancres for seven per cent. 3. *The occurrence of cerebral syphilis.* Ninety-five per cent. of these cases were traced to genital, and five per cent. to extra genital chancres. Notwithstanding these statistics, Fournier still insists that the digital chancre is grave, because it occurs, as a rule, in a physician who is generally run down and fatigued. The moral effect is depressing, for the physician, knowing the effects of the disease, lives in great anxiety. Finally, physicians do not take care of themselves. Some have therapeutic skepticism, some treat themselves, while others consult a great number of their confreres and continually change their medication.

Professional syphilis is much more common than is generally supposed. It is not a disease that reflects credit on its possessor, and the victim is disposed, both from delicacy and from professional interests, to carefully conceal the nature of his ailment. Because they recognize the danger and take greater precautions, specialists in venereal diseases are rarely contaminated. A digital chancre involves serious danger to those with whom its bearer comes into professional relations, and raises the question whether a physician is justified in continuing his professional work while he bears upon his hands such an active source of contagion. So far as the accoucheur is concerned, there is no doubt of his moral obligation to discontinue his work until the chancre is healed. Observation shows that digital chancres are most often contracted from mucous patches of the vulva, or from masked or concealed lesions in persons not known to be syphilitic. Many physicians called to a woman in labor make a digital examination without inspection of the genital parts or any knowledge of the patient's health. The hands should be thoroughly washed after the examination of any syphilitic, whether they came in contact with syphilitic lesions or not. For this purpose the free use of soap and hot water is better than the strong mercurial or carbolic washes employed by many surgeons. The latter often cause a chapped skin, offering a favorable site for inoculation.

Post-Mortem Intussusception Twenty Hours After Death.[3]

While making an autopsy of a female colored infant, one year old, twenty hours after death, I found the body emaciated with no exceptional lesions. Death had resulted from endocarditis. The intestine appeared normal, but five minutes later, while the thorax was being dissected, there occurred an intussusception of the ileum, the upper portion of the gut being invaginated into the lower. The intussuscepted part was about six centimetres in length. On handling the intestines, other portions of the jejunum and ileum started to invaginate themselves by what was apparently a reverse peristalsis. In a few minutes the entire small gut had become a mass of intussusceptions, varying in length from five to ten centimetres. There were between twenty and thirty separate invaginations in all. No solutions were used in or about the abdomen.

Extraction of a Chip of Steel from the Vitreous with the Electro-Magnet.[4]

A young mechanic was struck in the eye by a small piece of steel chipped from a cold chisel. After consulting several oculists, each of whom advised enucleation, he was referred to me. I found a clean incised wound in the ciliary region, just in front of the insertion of the external rectus muscle. With the ophthalmoscope the body could be plainly seen about two lines behind and to the lower and outer side of the lens. Vision was reduced to $\frac{20}{L}$, but still fairly good. No pain and no evidences of irritation were present. Taking into account the youth of the patient, the comparatively good vision, the freedom from infection and the smallness of the wound, I determined to remove the steel, if possible. I also got the consent of the patient to remove the eye in case I failed to get out the

[3] John Ruhrah, M.D., *Archives of Pediatrics*, April, 1896.
[4] B. A. Pope, B.S., M.D., *New Orleans Medical and Surgical Journal*, April, 1896.

foreign body. A solanoid with a specially designed soft iron core was used as an electro-magnet, and the current obtained from the large dynamo of Tulane University. The conjunctiva was anæsthetized with cocaine, and an incision made with a cataract knife between the external and inferior recti muscles, beginning just back of the ciliary body and extending back about four lines. The magnet was carefully introduced about one-eighth of an inch, the current turned and the steel could be seen by Professor Anderson, looking through the pupil, to at once spring to the end of the magnet and adhere there. On withdrawing the magnet the steel came with it. One suture was placed in the conjunctiva to hold the lips of the scleral wound together, and the eye bandaged.

The current that passed through the solanoid was twenty amperes at twenty volts, banks of lamps having been used to reduce it and avoid heating effects. The eye was kept well atropenized and the patient put on increasing doses of iodide of potash. On examination there was marked retinal congestion and some increase of the vitreous opacity. The iodide was pushed until the patient was taking sixty grains three times daily. Gradually all symptoms subsided, even the vitreous opacity becoming less marked. At present, more than two months after operation, the patient has $\frac{20}{XV}$ vision, can read with the eye, and it presents no signs of inflammation, but I will certainly watch it for any unfavorable change in the future. I will only add that such a piece of steel could not be grasped with forceps.

FUNCTIONAL DISEASES OF THE HEART.

Powell (*British Medical Journal*), describes a functional disease as one where the heart itself is normal, but there is a perverted action of the organ. The first condition is an undue perception of the heart's action, whether normal or altered; this he believes to be a central neurosis usually hereditary, which has either mental shock or nervous shock as the exciting cause; the rhythm of the heart is variable, with variable tension. Such cases are best treated by not ignoring the trouble, but persuading the patients to make the best of their unfortunate inheritance, insisting on fresh air, physical and mental exercise, short of fatigue, and avoidance of drugs. Oppressed action of the heart is accompanied by the symptoms of increased arterial tension, headache, tension over the brow, and cardiac distress. The peculiar weariness is referred to the apex; sometimes there is a fluttering feeling. It occurs in males. They rise late, hurry through breakfast, hurry through business, return fatigued, eat dinner and retire. Some of these cases have attacks of cardiac palpitation and distress which approach true angina pectoris.

Many cases of true angina pectoris belong to the functional group. In these vaso-motor excitation causes embarrassment of a heart which is structurally diseased.

In a certain group the heart's action is accelerated; among these are the ordinary cases of palpitation due to sudden emotion or exertion, as in athletes, or in a person in sudden danger. These cases are purely physiological. The rhythm is regular. In another class there is a diseased heart and irregularity of action, brought about frequently by disordered digestion. Direct irritation of the cardiac nerves by endocarditis or pericarditis will often cause irregular action. Overstrain is another cause of such disturbance.

Sustained hurry of the heart or tachycardia he believes to be of truly nervous origin, and the heart changes to be secondary.

Slow pulse, slow irregular pulse, and slow pulse with intermediate heart beats are all occasionally met with.

An abnormally slow pulse is occasionally met with as a sequel of diphtheria, influenza and typhoid. These cases, probably, are due to a neuritis of the cardiac branches, and to an inhibitory action on the cardiac muscle by the over-acid blood.—*University Med. Magazine.*

1853–1896

THE MEDICAL AND SURGICAL REPORTER

ISSUED EVERY SATURDAY

THE BUTLER PUBLISHING COMPANY, Publishers

Editor and Manager
HAROLD H. KYNETT, A.M., M.D.

Associate Business Manager
WM. H. BURR, M.D.

Editorial and Publication Offices, 1026 Arch Street, Philadelphia, Pa.
P. O. BOX 843

Editorial Staff:
A. L. BENEDICT, A.M., M.D. SAMUEL M. WILSON, M.D.

TERMS:—One year, three dollars in advance. Four months' trial, one dollar in advance. Subscriptions may begin at any date.
REMITTANCES should be made by Draft, Money Order or Registered Letter, payable to the order of the Butler Publishing Company.
COMMUNICATIONS for the Editor, and books for review, should be addressed to the Managing Editor of the MEDICAL AND SURGICAL REPORTER, 1026 Arch Street, Philadelphia.
BUSINESS COMMUNICATIONS, and letters referring to the publication, subscription or advertising department, should be addressed to the General Manager, P. O. Box 843, or 1026 Arch Street, Philadelphia.
CONTRIBUTIONS of value to the medical profession are invited from all sources. Original articles, contributed exclusively to the MEDICAL AND SURGICAL REPORTER, will be paid for at liberal rates, after publication (payments made quarterly), or a limited number of reprints will be furnished as the author may elect. Extra reprints will be supplied at cost rates to the journal. Orders for reprints *must accompany* MSS. To ensure the return of contributions not made use of, writers must enclose return postage.
THE MEDICAL AND SURGICAL REPORTER will not be responsible for the opinions of its contributors.

PHILADELPHIA, SATURDAY, APRIL 18, 1896.

EDITORIAL.

CYCLOPEDIC MEDICAL LITERATURE.

In a recent editorial reference to the value of periodical medical literature, we had occasion to allude in somewhat disparaging terms to conglomerate treatises on medical subjects. Our attention is again attracted by the action of British authorities in excluding certain American text-books of this class on the ground that much of the material contained has been pirated from the writings of Englishmen. We do not wish to discuss the merits of this action save to say that we can hardly believe that American publishers and physicians have passed the limits of justifiable and necessary quotation from recognized authorities.

Though aware of the existence of several standard treatises which deserve warm commendation, the REPORTER admits a prejudice against literary conglomerates, in and out of the domain of medicine. Authorship naturally produces but one kind of fruit and however much we may admire the art that has grafted a diversity of branches on to one trunk, we can not expect that each shall bear the most perfect fruit of its kind. Whether the example presented is a collection of gems suitable for declamation or of selections from works of art designed to facilitate the acquisition of a smattering of culture, or a symposium on some scientific subject or a many-

volumed system which boasts of covering the whole range of medicine, we believe that almost every example of heterogeneity is inferior to the carefully-prepared book of a single author. Occasionally, two men may collaborate in producing a book which is a little less personal and a little more extensive than usual but, like the product of a single mind, such a work depends on careful study and experiment; it goes to the publisher largely on its own merits and although specious and extrinsic attractions may enhance its popularity, it is subject, in the main, to impartial judgment and is a natural outcome of genuine interest in a subject. The medical conglomerate, on the other hand, lacks spontaneity, it is projected in the business office of a publishing house, not to set forth newly-discovered or newly-understood facts, but for purely mercenary motives; however well chosen its writers may be, there is a lack of coördination and government and a corresponding deficiency in logical arrangement and completeness. Too often, it appears that the author of a section, realizing that he has been invited to contribute simply to lend his name and influence to the work, fulfills his debt to the publisher but fails to give that conscientious study which he owes to the reader and without which an individual's book would prove a financial failure.

However well organized and executed the preparation of a cyclopedic treatise, certain defects are inevitable. It must either be so incomplete as to be practically worthless in each part except for the rudimentary training of a student or of a practitioner who has no ambition to be thorough, or it must tax the purse and fill the library shelves with a superabundance of useless erudition. Again, any work arranged according to the usual cyclopedic form is of comparatively little value till the general index is issued and the last volume, containing this, does not appear till the earlier volumes are already somewhat out of date.

We believe that the most judiciously chosen, the most truly economical medical library is that in which each volume represents one subject and the careful research and compilation of one man. Here, the dictionary is a book of words; if the physician seeks information concerning digitalis and its allied drugs, he turns the page to read of strophanthus, not of digital examinations in gynæcology and of the surgery of the digits; as a book grows old and is supplanted by others, it can be replaced without, at the same time, discarding works on anatomy and other branches which remain practically unchanged for a considerable period. Here, too, the seeker after information is appealing to an author who cannot divide the responsibility of exactness with a circle of colleagues.

Plants Before Animals.

In making a report of his researches on the constitution of the atmosphere to the French Academy of Sciences, Dr. T. L. Phipson recently asserted that the presence of free oxygen in the air, on which animal life depends, is entirely due to vegetation. It was the primitive plants of early geological time that supplied the greatest quantity of oxygen to the atmosphere. Free oxygen is still given off by plants, but the lower plants, such as the simplest algæ, supply much more oxygen in proportion to their weight than do those of superior orders. According to Doctor Phipson the cerebro-spinal nervous system, which is the highest characteristic of animal life, has gradually become more complex in proportion with the increase in the relative quantity of free oxygen in the air.

The scientific aspect of food must be united in the bonds of holy matrimony with a practical knowledge of the cook's art, before a man can discourse learnedly of food.—*Fothergill.*

CORRESPONDENCE.

OVARIOTOMY IN A HOVEL.

EDITOR OF THE REPORTER:—

I wish to report a case which, to me, has been one of unusual interest because of the apparently unfavorable surroundings, and the desperate condition of the patient at the time of operation, which, happily, was followed by results the most modern equipped hospital, with every facility of complete surgical technique and trained nursing, might be proud to record. It further illustrates the fact that asepsis and antisepsis can be put into practice in the hovel as well as in the palace if it be the will of the operator. It shows, moreover, of how much greater importance is the personal supervision of the surgeon, than is all the paraphernalia of marble-floored operating rooms and dust-proof instrument cases with which modern hospitals are furnished.

In the rear of —— Madison Street, in this city, facing on a narrow alley, stands a small story-and-a-half house in which lives a family of colored people surrounded by the squalor and unhygienic conditions which characterizes such a locality. Here, on the morning of Nov. 7th, Dr. H. J. Stubbs was summoned by Dr. J. B. Stubbs, medical attendant, to a young colored woman, apparently on her death bed. A history as follows was obtained: M. D., aged twenty-one years, had always suffered severely at her menstrual periods, which began when she was twelve years of age. At fifteen, she had married a worthless man who, after a time, had abandoned her, having first infected her with gonorrhœa. The poison had extended from the vagina into the uterus, tubes and ovaries, setting up an inflammation which, by extension, had caused the present acute and severe peritonitis. This, except in severity, was not unlike several previous attacks which, while subsiding somewhat, were not entirely relieved from one menstrual epoch to another.

The first visit found the patient in an extremely exhausted condition, temperature 103° F., pulse rapid and weak, abdomen distended and so sensitive that palpation was impossible. After a few days of palliative treatment it was decided that laparotomy was the one rational measure which could promise permanent relief. Accordingly the only room on the second floor (dimensions, eight by ten feet), was prepared under the direction of the surgeon, by fumigation, white-washing, and thorough scrubbing with bichloride solution, and laparotomy was performed by Dr. H. J. Stubbs, assisted by Drs. Briggs and Spruance.

An unusual condition was found in the extreme vascularity of the abdominal walls, probably due to repeated congestions. Several arteries had to be tied in cutting through the abdominal wall. Both ovaries and tubes were enlarged and congested, and the lumen of the tubes filled with cheesy, broken-down material, intermingled with pus.

Complete extirpation of both ovaries and tubes was followed by rapid and uninterrupted recovery. Upon the first removal of the dressings, five days later, union by first intent was found to be perfect. After two weeks the patient was allowed to sit in an upright position in bed, and at the end of four weeks she was about the house. Four months have now elapsed since the operation, the patient has gained fifteen pounds in weight, and is in better general health than at any time since childhood.

My object in reporting this case is to impress the necessity of a careful and accurate diagnosis, and of prompt surgical interference when it is indicated, even though the advantages are far from favorable. The every-day work of the general practitioner of medicine consists chiefly in the alleviation of suffering and assisting nature in restoring to a normal condition some perverted function caused by the violation of her laws; but occasions do arise when an immediate

decision of the physician's surgical procedure, determines the life or death of his patient. It is at such times that professional men ought to exercise the greatest amount of discretion, both as regards the operation to be performed and the operator who is to do it. Occasionally in cases of great emergency no choice is left in the matter, which results that all practicing physicians should improve every opportunity to become as familiar as possible with all details of the various surgical procedures that it may be within their power to possess themselves of.

Respectfully,

H. W. BRIGGS, M.D.

Wilmington, Del.

AN OBSTETRICAL EXPERIENCE.

EDITOR OF THE REPORTER:—

On February 27th, 1896, at 9.30 P.M., I was called to attend Mrs. Y., in her third confinement. She was a solidly built woman, about 25 years of age, by occupation a circus performer. She had done trapeze work with her husband. Upon my arrival I found her sitting up and feeling quite well, but a few moments previous she had had a sharp hemorrhage lasting but a moment. Pains were mild and of short duration. She stated that every Wednesday for two or three weeks past, she had had a slight hemorrhage, but still continued her stage work. I may say that during the winter months she traveled with a comedy company, giving almost nightly entertainments, up to the time of her confinement.

After thoroughly disinfecting my hands, I made an examination and found the os dilated to about the size of a silver dollar, the bag of waters presenting. At about 12 P.M., the bag of waters ruptured and the uterus became inactive. I waited about one and one-half hours, and as the uterus did not seem to be in a hurry to resume operations, I administered one-half drachm f. e. ergot. In about an hour's time pains again commenced. After two or three small pains, I found to my horror the cord and right shoulder presenting. Realizing that version must be performed, I attempted it without an anæsthetic. After two or three fruitless attempts I had Dr. W. called in. He confirmed my diagnosis, and after placing her fully under the influence of chloroform we succeeded, after one hour of hard work, in performing podalic version and delivering her of a dead fœtus. The placenta and membranes came away intact.

Our manipulations having been so hard and long, we realized that there was trouble ahead and took all the precautions possible. We at once administered an intra-uterine douche of hot bichloride (1 to 5000), scrubbing the external genitals with the same solution. Everything went smoothly until the third day, when she had a slight shivering. We at once curetted with a douche curette, using bichloride as before, and gave twenty grs. of quinine at one dose. This seemed to control the temperature, which at the time was 103.5° F., applying turpentine stupes to the abdomen, which was very tympanitic. This treatment, with the addition of large doses of whiskey (two tablespoonfuls every hour), and the constant application of hot flannels to the abdomen, was continued for several days, until the temperature was near the normal and the tympanites *nil.*

March 13th, after almost one week of seeming convalescence, the temperature suddenly arose to 102.5° F. I gave fifteen grs. of quinine, and called again in an hour's time to find the temperature going down nicely, with profuse perspiration, when,—I was not very politely asked to not return.

At the present writing (April 10th), I learn that she is still under the doctor's care, and is very slowly getting well.

Thus terminated (suddenly to me) one of the most interesting obstetrical cases I have met in nine years of practice.

FRANK P. BUTLER, M.D.

Whitten, Ia.

ABSTRACTS.

ANIMAL EXTRACTS.*

HORATIO C. WOOD, M.D., LL.D., PHILADELPHIA.

There has arisen within the last few years a method of using certain animal substances in the treatment of disease which rests upon a sound scientific basis and is already making a record of increasing triumphs.

There are, apparently connected with the circulation, in the human body certain organs which are sometimes spoken of as ductless glands, whose anatomy is obscure and whose function has hitherto been unknown. As the results, however, of recent investigations we now know that these glands are in some mysterious manner connected with the function of nutrition throughout the whole body, and that their removal or a perversion of their function is followed by severe universal symptoms.

The only explanation we can give is that these organs form some substances which have relations with all the tissues and which modify everywhere protoplasmic movements. If this be true, the secretions or substances produced in these glands belong among alterative remedies. The symptoms of myxedema, as first described by Ord, are increasing weakness associated with swelling of the body, enlargement and thickening of the skin, exudation into the subcellular tissue, and a very extraordinary slowness of all functions. The appetite is feeble, the movements are slow, the temperature is subnormal, the patient thinks with great slowness, and as the days go on this universal slowing of function becomes more and more marked until the patient sinks into a condition of complete apathy with very much lowered temperature, and a failure of all vital activities.

Kocher, living in a country where the thyroid enlargement known as goitre is very common, extirpated this tumor in a large number of cases. By and by he found that these cases took upon themselves all the symptoms of myxedema, and at last he had in the Berne Hospital a large number of typical cases of myxedema which were the result of extirpation of the thyroid gland. That it was the removal of the thyroid gland which produced this disturbance of nutrition was soon shown by the fact that if he removed only half or one-third of the gland myxedema failed to develop.

Horsley, of London, made a series of experiments upon monkeys. He removed the thyroid gland and found that the result was a production of symptoms like those of myxedema,—apathy, lowering of temperature, exudation of mucin into the subcellular tissues, tetanoid symptoms, and, finally, death from progressive loss of all functional power. These experiments suggested to Murray the use of the thyroid gland in the treatment of these disorders. The results were most astonishing. Little by little progressive deterioration was arrested by the use of the thyroid extract, and the patient finally restored to health.

It is evident, therefore, that myxedema is the result of the absence from the blood of some principle or principles which are supplied by the thyroid gland, and it is further evident that after the myxedema has been removed by the use of the thyroid gland the patient must relapse if left to himself. The treatment of myxedema, therefore, consists of two stages, the first, that in which large amounts of the gland are given in order to remove the results which have been produced by the lack of the thyroid principle; the second, in which for months and years small doses of the gland are taken in order to prevent the recurrence of the myxedemic symptoms. We have no knowledge of the nature of the thyroid principles; we know that it

*Lecture delivered at the University of Pennsylvania, February 20, 1896.—*Univ. Mag.*

is not necessary to use the raw gland; that its activity is impaired, but not destroyed by slight cooking, and that the gland yields its activity to glycerin, and that the activity is not destroyed by careful desiccation. A further important fact is, that though the remedy acts more quickly and effectively when given hypodermically, it may be given by the mouth successfully. So far we have a firm scientific foundation for the use of the thyroid extract; we now come, however, to the consideration of its empirical employment.

Thyroid extract has been tried in very many diseases.

In hypertrophy of cicatricial tissue resembling keloid, possibly true keloid, thyroid extract has caused absorption of the hypertrophied and cicatricial tissue. In has been used with success in simple goitre, in the goitre of Switzerland, before calcareous degeneration has taken place. It will bring about destruction and absorption of the overgrown tissue. In excessive obesity, with tendency to weakness and anæmia, in which exercise and diet fail, thyroid extract should be tried. Thyroid extract is sometimes useful in melancholia, but how it acts we do not know.

When thyroid extract is used freely in continuing doses it sometimes produces a series of phenomena constituting the so-called thyroidism. The most important of the symptoms are loss of weight, shortness of breath, and a weak and rapid pulse. In all cases in which the extract is being used freely and continuously, but especially in those cases in which the symptoms are not those of myxedema, the patient should be weighed at least every two weeks, and any undue loss of weight or disturbance of circulation or respiration should be the immediate signal for the withdrawal of the remedy or a great reduction of the dose.

The thyroid extract has been largely used in exophthalmic goitre, but here I am sure it does harm. The cause of the symptoms in exophthalmic goitre probably is the excessive development of the thyroid secretion. In a case of pronounced and persistent exophthalmic goitre, under my care, there was an injury to the spleen followed by abscess which was opened, and after months of severe illness recovery occurred. In the second or third week of the splenitis the goitre began distinctly to diminish By the fifth week the goitre had disappeared, and since the woman has recovered from her illness the goitre has not returned.

Excision of the thyroid gland produces enlargement of the spleen, so that there is some relation between the two glands. I have used splenic extract in three cases of exophthalmic goitre, one went home apparently cured, and the two others were much benefited.

The functions of the ductless glands known as the suprarenal capsules still remain a mystery. This only is certain, that disease of these capsules is followed by progressive asthenia, a peculiar bronzing of the skin, and loss of digestive power with excessive vomiting. Two years ago I was called in consultation to such a case, in which the patient had lost seventy-five pounds in weight, was entirely unable to retain food, and was so weak that she could not sit up in bed without fainting. Under the administration of the glycerin extract of the suprarenal capsule the patient began at once to improve, and a few months later came from her country home to my office apparently well; the skin, however, still remaining bronzed.

I know of two or three other cases of Addison's disease in which benefit was derived, and there have been some cases of failure reported. There is, however, a special reason for failure. Suprarenal capsules are ordered from some apothecary, who has a faint notion that the suprarenal capsules consist of fat, and he gets a lump of fat out of the belly of an animal, and the doctor wonders why he don't cure his case of Addison's disease. Always see that a first-class veterinary surgeon gets the capsules himself from the beef. In the cases cited I employed the glycerin extract in doses of ten to fifteen minims hypodermically.

Extracts of the bone marrow and of the spleen have been employed in the treatment of leucocythemia, but so far there has been no great success, and the reason of the failure is obvious when we remember that in leucocythemia the bone-marrow is hypertrophied, not atrophied. It is not probable that glycerin extracts of marrow will prove valuable,

since there is already too much marrow activity.

In pernicious and other anæmias, extract of bone-marrow has been employed by Frazer, Hamilton, J. S. Billings, Jr., and others, with varying results. All that can be said at present is that there is sufficient evidence to warrant the administration of the medullary glyceride in cases of severe anæmia.

There have been used and much advertised in medicine all kinds of animal extracts, "cerebrine" from the brain, "cardine" from the heart, and so on. The only possible theory which could point toward these substances being of value in medicine is that every organ takes something out of the blood for itself and therefore leaves the blood more pure and free from substances which are deleterious to other organs. There is no probability of truth in this theory, no reason why extract of brain should have any influence on the brain or extract of heart upon the heart; neither of these organs has any known connection with nutrition.

It is somewhat different with Brown-Séquard's famous elixir of testicles. The genital glands hold some relation to the general nutrition. Their removal early in life modifies the whole physical and moral character of the animal, and, therefore, *a priori*, it is possible that there might be obtained from these glands a substance which would have some effect upon nutrition, but it is only during the developmental period that these glands are active in their relation to nutrition, and clinical results have not confirmed the assertions of Brown-Séquard, so that his famous elixir is to-day rarely if ever used.

A second class of animal substances capable of use in medicine are those which are the products of bacterial growth in the animal organism. Many and probably all pathogenic germs produce in the animal organism two substances capable of violently affecting nutrition, which substances are believed by chemists to be of albuminous nature. To one class has been given the name toxin; to the other, the name antitoxin.

The toxin is the substance produced by bacteria beneficial to the bacteria itself, whilst the antitoxin, although produced by the bacteria, is hostile to it. In infectious diseases there is a battle between the toxins and the human animal aided by the antitoxins.

The toxin has twofold action. It acts locally as a poison, and it affects the general system. Thus, the bacillus of diphtheria growing upon the throat forms there a toxin which attacks the immediately surrounding tissue and so weakens it that the bacterium is capable of overcoming the natural resistance of the part. As the toxin is absorbed into the blood, it affects the general system and produces the constitutional symptoms and the wide-spread lesions of diphtheria. That the *rôle* of the toxin is important is shown by the fact that various pathogenic bacteria introduced into the living animal without any accompanying toxin are unable to overcome the resistance of the tissues and fail to develop.

The antitoxin is in some way destructive to the bacterium. How it acts is still a matter of theory; it is proven that it is not a germicide and is not capable of killing the pathogenic organism. By some it is thought chemically to act upon the toxin, but the present evidence renders this improbable. The most plausible explanation is that the antitoxin in some way so affects the protoplasm that the latter is able to resist the action of the toxin. If to an animal suffering from infectious disease due to the local lodgement of a pathogenic germ antitoxin be given, the first evidence of its beneficial action is the failure of the bacteria to grow, though they are not killed.

Some years ago the world was almost convulsed by the alleged discovery by Koch of a method of curing consumption. The science of the subject had not then been worked out far enough for any one to comprehend clearly the method in which this so-called tuberculin cured tuberculosis, but to thoughtful minds it was apparent from the beginning that tuberculin could not cure tuberculosis if it acted as Koch said it did.

The allegation of Professor Koch was that tuberculin acting in conjunction with the bacillus so increased its local action that a tissue surrounding the tubercle rapidly softened and was cast off with the tubercles. With our present

knowledge the whole subject is clear. The tuberculin of Koch was simply an impure toxin. When the tubercle bacillus grows in the human lung, the toxin which it forms slowly kills the tissues and produces ulceration; at the same time, finding its way into the blood, it causes the so-called hectic fever and the various constitutional symptoms with which you are familiar as occurring in chronic tuberculosis. When Koch's tuberculin—that is, tubercular toxin—is injected into the blood in a certain small quantity, it produces no febrile reaction in the normal individual because there is not enough of it. If, however, the injected toxin be aided by a toxin which has been produced in the system, and which is already in the blood, the aggregate amount will be capable of producing a hectic fever. At the same time the injected toxin will reinforce the local action of the bacillary toxin, and so bring about rapid ulceration of the lung and discharge of the tubercle. Injection of such a toxin, though it should lead to the discharge of every tubercle bacillus, would not cure the patient. The tuberculin does not affect the primary weakness of the consumptive individual,—that is, the lack of power to resist the tubercle bacillus,—and does not even prevent reinfection by the loosened tubercle. Indeed the very loosening of the tubercle bacillus favored its entrance into the lymphatics and the blood-vessels, and its consequent dissemination throughout the body, so it was not long before Virchow found out that a general tuberculosis often followed immediately upon the treatment of a local tuberculosis by injection of tuberculin.

The outlook for the cure of tubercular disease by agents of the class which we are considering does not, to my thought, seem at all bright. In favorable cases after a certain time diphtheria ends of itself, typhoid fever gets well of itself, and erysipelas goes on to recovery of itself; then recoveries take place because a sufficient quantitity of the antitoxin has been produced to put an end to the conquest by the bacteria. You do not see this in tuberculosis. There is never a sufficient production of antitoxin in a case of tuberculosis to arrest the growth of the tubercle bacillus; therefore it does not seem probable that we will ever get a tubercle antitoxin that will be successful.

Antitoxins have been used to a greater or less extent in tetanus, in diphtheria, in erysipelas, and in other infections.

Tetanus is produced by a bacillus. This bacillus inoculated into the wound takes usually from three to eight days to develop itself fully. In some cases it takes two or three weeks. Then comes an outbreak of symptoms which are not due to the invasion of the blood by the bacillus, but to the presence in the blood of the toxins which have been produced.

Although the incubation period of tetanus is often so long, in many instances death has occurred within twenty-four hours after infection. Jaccoud reports a case of a negro, where death is said to have taken place fifteen minutes after the reception of the wound. It is plain that in such a case the man was inoculated, not simply with the tetanus bacillus, but with a tetanus toxin which had been produced outside of the human body. Cattani pricked himself with a needle which had been dipped into a solution of toxin in which there were no bacilli, and had an attack of tetanus from which he barely escaped with his life. The tetanus toxin, therefore, can be produced outside of the human body as well as in it. Of all known substances it is the most active as a poison. The dose of it is about one-two-hundredth of that of strychnine. Thus, if a quarter of a grain of strychnine given hypodermically would kill a man, the one-eight-hundredth of a grain of this toxin would prove fatal.

In the laboratory, tetanus can be cured with absolute certainty. You can tetanize the rabbit and cure him according to a mathematical formula by means of antitoxin. But in the laboratory it is always known exactly how much toxin is given to the animal, and the dose of antitoxin is proportioned to the dose of toxin, and more than this, the antitoxin is given just before or immediately with the toxin; whereas in human tetanus the man has the toxin through his whole system before the tetanus is recognized, and you can see why, therefore, the treatment of tetanus by antitoxin has been so exceedingly unsatisfactory.

Cattani, in his summary of the mat-

ter, does not believe that the antitoxin is of any use in cases in which the symptoms are severe enough for death to occur within the second or third day,—that is, in the acute forms of tetanus. In subacute and chronic tetanus in which symptoms come on during eight or ten days, antitoxin has seemed to save life. It must not be forgotten that the chief value of the antitoxin is not in overcoming the constitutional action of the toxin, but in preventing the formation of the toxin by inhibiting the growth of the bacillus.

One difficulty in the antitoxin treatment of tetanus is the absence of uniformity in the various serums, and of any normal unit. Merck & Co. furnish a solid antitoxin made in Bologna by Tizzoni & Cattani. This is to be dissolved in warm water which has been recently boiled, and given with all antiseptic precautions, no chemicals, however, being employed. Care is necessary also that none of the appliances be hot at the time of use, as the antitoxin is rapidly decomposed by heat. If the case be taken early and be not extremely severe, half the contents of a bottle is to be injected as the first dose; the other half is then divided into four doses, which are to be given in the course of the following day or days. These doses are to succeed one another more or less quickly, according to the action produced on the tetanic symptoms by the previous doses. If the case be a grave one, or the treatment be commenced late, the whole contents of one bottle is to be injected at once; the second bottle to be used for the following injections, quarter of the contents at a time, every six to twenty-four hours, according to the severity of the symptoms. Larger doses of the antitoxin are stated by Tizzoni and Cattani to be perfectly safe.

Pasteur's antitoxin, prepared, I understand, in Paris, is also furnished by Merck in solid form, three grammes in a twenty-five gramme bottle. The bottle is to be filled with warm—not hot—sterilized water, and sixteen to thirty-two minims (one to two cubic centimetres) are to be injected every six to twelve hours according to the severity of the symptoms. One to two bottles may be given during the first day, and it is stated that four or five bottles may be necessary for a cure.

My experience with the antitoxin treatment of tetanus is confined to one case, which I saw in consultation with Dr. Radcliffe Cheston. Although this was an example of very mild, slowly-developed tetanus, the patient died upon the seventh day of the disease, notwithstanding the use of Pasteur's antitoxin, obtained from the institute in New York. On the fifth day of the disease, under the use of bromide and chloral, the patient seemed better, with normal temperature, pulse 84, and good morale. She was able to move the jaws a little, but had some slight spasm of the muscles of the back. The antitoxin was then injected; two hours later the temperature rose two degrees, with increased frequency and weakness of the pulse. The injections were repeated five times in twenty-four hours, and, in the belief of Dr. Cheston, in each case there was produced by it distinct heart-depression and elevation of temperature. The subject died of exhaustion and pyrexia (106°F.), without severe spasms. There was no evidence in this case of the antitoxin doing any good; indeed, Dr. Cheston, who watched the case, thought it largely contributed to the fatal result. It will be noted that this case was one which had a fair chance of recovery under the old treatment, whilst the death from exhaustion with rapid rise of temperature after the antitoxin is precisely parallel with the result reported by Schwartz, who believed also that in his case the exhaustion and the rising temperature were referable to the antitoxin.

There are largely sold at present, various antitoxins of diphtheria. I cannot take time to-day to give you the statistics of the antitoxin treatment of diphtheria, and I will agree with some in believing that the exact value of this treatment has not been thoroughly established. On the other hand, I am absolutely of the opinion that the value of the treatment has been sufficiently shown to require every conscientious physician to use antitoxin in diphtheria just as much as he would use quinine in malaria. I can only speak of one of the more recent publications in regard to the general mortality of diphtheria in the city of Paris. For three years, in the first quarter of each year, there were 1743 cases of diphtheria, with a mortality rate of 53 per cent. In August

of 1894, the antitoxin treatment began to prevail in Paris, and was fully in use by January 1, 1895. The result was that in the first quarter of 1895, instead of over 1700 cases of diphtheria, there were only 520 cases. Every case of diphtheria to which antitoxin is administered in the first twenty-four hours, prevents or lessens the chances of infection. That is the reason that 500 instead of 1700 cases were reported. In other words, a mortality of 53 per cent. has been reduced to a little under 15 per cent.

A fact we are especially interested in is that large numbers of physicians still believe that antitoxin does no good in diphtheria. The reason of this, I think, is not far to seek. In the first place, antitoxin cures, as I have told you, by arresting the growth of the bacillus. If you give the antitoxin the third day you may stop the growth of the bacillus, but every tissue of the patient's body is already poisoned unto death with toxin, and most tissues have already undergone irreparable degeneration. The child goes on to death although you have arrested the diphtheria, because of the ravages which the disease has already produced. It does not die directly or immediately of the diphtheria, but it dies from the effect of the diphtheria. The second reason is that in bad cases of diphtheria there is more than a diphtherial affection. Right on the heels of a diphtheria, cobrethren in destruction with the Löffler bacilli, come various streptococci, and the minute the throat begins to be ulcerated you have added to the diphtherial infection streptococcic infection, and though you do kill the bacillus in time, the case goes on to death by streptococcus infection. It is the secondary infection which kills under these circumstances. A Löffler bacillus antitoxin is useless against a streptococcus toxin. Theoretically at least, two antitoxins should be used and not one in most cases of advanced diphtheria.

The absolute importance of the use of the antitoxin during the first day of diphtheria is evident. There are very few, if any, well-observed cases of diphtheria on record in which it has been positively determined that the antitoxin administered during the first few hours after the outbreak of the disease has failed to bring about a cure. On the other hand, our statistics seem to show that if the injection be postponed to the fifth day, the mortality rate with the use of antitoxin would be no less than without it.

Our modern municipal scientific methods, notwithstanding all laudation, are very liable to become causes of death. A case of suspected diphtheria presents itself to the practitioner. The child has been sick, it may be, one or two days. A culture-tube is prepared, sent to the Municipal Laboratory, examined, and the result sent back to the practitioner, who then goes to see the patient. It is very lucky if not more than one day is lost in this way, and the loss of those hours may well mean the loss of the life, for the time has elapsed during which the antitoxin would act. There is no reason at present for believing that the antitoxin used in moderate quantity does any harm when the child has not diphtheria. When, therefore, any case presents the clinical aspect of diphtheria, the antitoxin should be used at once. For educational purposes, and for rendering definite our knowledge, the municipal laboratories are useful. For therapeutic purposes the less attention paid to them, probably, the better for the patient. The use of antitoxin in any case of diphtheria should not interfere with the local treatment of the throat and the employment of other judicious measures for the relief of the patient.

As it is never possible in any case of human diphtheria to know how much of the toxin is in the system, exact antitoxin dosage is impossible. But some general working rule must be formed, especially as there are a large number of serums of varying strength upon the market. Universal consent now seems to have been given to the recognition of Behring's antitoxin unit, which is an antitoxin serum of such strength that one cubic centimetre of it is capable of overcoming ten times the minimum fatal dose of the toxin for the guinea-pig. One hundred and forty Behring's units may be injected at one time into the buttocks or into the back in an ordinary case of diphtheria. If no effect occurs, one hundred units may be given the

second day. If the nature of the case be doubtful, especially if the injection is being practiced very early, it is better to give only seventy to one hundred units at the first dose, repeating the injection in the same amount on the second day, and even the third day if the symptoms require it.

I cannot find that there is any case on record in which a fatal result in diphtheria was fairly attributed to the antitoxin. Sometimes, however, it produces disagreeable symptoms. Among the most characteristic of these is a rash of variable character; sometimes it is scarlatinoid, sometimes rubeoloid, sometimes it is a wide-spread erythema. It may be accompanied by swelling of the joints and by fever, but it seems always to subside without serious results.

A. Marmorek has reported the use of streptococcus antitoxin, prepared in the Pasteur Institute of Paris, in erysipelas, affirming that the results were on the whole good, though they appear not to have been uniform. In mild cases of the disease he gave a single injection of ten cubic centimetres of the serum; in bad cases he employed twenty cubic centimetres, and followed it in twenty-four hours by ten cubic centimetres more. In one bad case 120 cubic centimetres of the serum were injected within ten days.

The possibility of an antitoxin treatment of septic poisonings opens a very attractive field of investigation. There can be no doubt but that in diphtheria, in scarlet fever, and in many other diseases, death or permanent injury results from a secondary septicemia as much as, or sometimes more than, from the original infection; and Marmorek alleges that in scarlet fever, and even in the treatment of the septic arthritis, which is commonly known as scarlatinoid rheumatism, the streptococcus antitoxin has yielded excellent results. Gromakowsky, having obtained good effects in animals from the use of a streptococcus antitoxin, has in a few cases of streptococcus-poisoning in man gained advantage by the use of a serum made from rabbits. Pozzi, Dieulafoy, J. E. Kelly, Sevestre, Cuffer and Bar have all used, though seemingly to a very limited extent, the streptococcus antitoxin, and on the whole the reports are favorable. In diphtheria it is now alleged by some that by the use of a double antitoxin serum—*i. e.*, of Löffler's bacillus and of the streptococcus—both the primary and secondary infection can at once be met. In the University Hospital one desperate case of streptococcus infection has been treated by serum prepared in the Pasteur Institute of New York. Recovery occurred, but Professor White says he is in grave doubt how far the serum contributed to it. Certainly the whole subject is in the earliest experimental stage.

In any case of septic infection it is, of course, essential to employ the proper antitoxin, rarely, however, is it necessary to wait for a cultivation; the clinical features in most cases being sufficient to distinguish the cases. An infection which is localized, produces freely of pus, has but little tendency to run, is usually due to a staphylococcus; one which produces serous or ichorous rather than purulent exudation, and rapidly courses along the lymphatics, or gives rise to erysipelatoid symptoms, is the result of the labors of a streptococcus.

Chloroform Versus Psalms as an Analgesic.

It was in attendance on a young primapara. She suffered very much and chloroform was administered. She duly appreciated it as will be seen.

Her mother, a very pious and sympathetic old lady, remarked to her: "My daughter when I was in labor, I always got a great deal of relief by repeating the 23d Psalm." "Now you repeat after me."

Mother.—"The Lord is my shepherd, I shall not want."

Daughter.—"The Lord is my shepherd I shall not wa-'wa-'wa." "I want some chloroform!" "Mama! Please don't bother me just now with psalms."

Dr. Fick has shown that winking is more frequent as the retina becomes more fatigued, and it has been found that in reading at a distance of thirty centimeters the number of winks per minute is 1.8 with electrical illumination, 2.8 with gaslight, while with weak illumination which only permits reading at eighteen centimeters the number is 6.8 per minute.

INFANT FEEDING—A REVIEW.

Jacobi, (*American Medical and Surgical Bulletin*) writes:—Nothing has been more successful in removing the dangers of intestinal disorders and the sources of excessive mortality in the last decade than the widespread custom of sterilizing (or pasteurizing) cow's milk. Both are the logical development of treating milk by boiling, which the author has persistently advised for the last thirty-five years.

Boiling expels air. It destroys the germs of typhoid fever, Asiatic cholera, diphtheria, and tuberculosis; also the oidium lactis, which is the cause of the change of milk-sugar into lactic acid and the rapid acidulation of milk, with its bad effects on the secretion of the intestinal tract. Some varieties of proteus and most of the bacteria coli are rendered innocuous by boiling.

But diarrhœa is only a symptom of many causes, and cholera infantum itself is a name for many conditions. Babies at the breast are subject to cholera infantum, particularly in Southern climates and in public institutions.

The influence of external temperature is a very important factor. Babies taken suddenly from a hot railroad car to the deck of a lake steamer, from a warm bed to a draughty room, may develop catarrhal enteritis. The morbid condition of the epithelium caused by such sudden changes is the important cause of disease, because it opens the way to all sorts of infecting substances, whether they are poison in cow's milk or indigestible baby foods.

Germs of disease, according to Schild, may be found in the intestine of the newly born in ten to seventeen hours after birth. The meconium, originally sterile, is soon infected through the mouth and anus, from the linen, the bath, the air, and the blood itself. Even breast-milk is not free from danger, bacteria having been frequently found in healthy breast-milk even when no mastitis or other local disease was present.

A not uncommon germ, the so-called hay or potato bacillus, frequently found in dirty stables, and for that reason in milk from dirty cows, cannot be destroyed by ordinary sterilization without affecting the nutritious qualities of the milk. This in pure cultures causes diarrhœa in dogs and peptonizes casein. These various dangers do not render futile the process of boiling milk, but merely indicate the danger of relying on a single preventive when there are so many causes for intestinal disorder.

Daily home sterilization is far preferable to risky purchase from wholesale manufacturers who cannot guarantee, because in the nature of things they cannot know the conditions of their wares. The fermenting process is not always stopped by sterilizing, and butyric acid may be found in place of lactic acid, and gas produced giving rise to flatulency, even in the most elaborately sterilized milk.

Cream is often separated from sterilized milk which is exposed for sale, and this is very undesirable. At best sterilization of milk will not transform cow's milk to mother's milk, for there is a chemical difference between the casein of the cow's and woman's milk. Cow's casein precipitates a "paranuclein" undissolved and undigested, after pepsin digestion, while the casein of woman's milk retains its "nuclein" in solution and is fully digested, and contains also an additional albuminoid not identical with either known casein albumin.

For this reason exclusive use of sterilized cow's milk will not infrequently produce constipation or diarrhœa, or even rachitis or scurvy in a young infant.

In order to finely divide and suspend the casein in cow's milk, and to add a nutritious element, cereals should be added even in the first days of infancy.

The author advises a free dilution of milk with four to five parts oatmeal or barley water to act in this mechanical way on the casein, to meet the extra demands of a growing infant for water, to avoidthe danger of uric-acid infarcts and other renal complications, which are by no means uncommon, and also to assist in pepsin digestion.

The method of pasteurization as developed by Freeman, and of modifying milk, as carried on by Rotch and others in the scientific milk laboratories of

Boston and elsewhere, deserve the highest recommendations.

The centrifugal method of separating cream and milk carried on in these laboratories is valuable, for it makes it possible to produce an exact standard and safe grade of milk and cream, and thus makes the production of a carefully prepared milk in definite percentages of strength possible.

By producing on demand milk of any percentage of strength and composition, it is possible to meet the varied requirements of different infants.

The early use of a little animal broth or juice of milk and at times small doses of phosphorus (elixir phosphori), if after careful feeding the formation of muscles and bone is slow, is advisable.

PERISCOPE.

MEDICINE.

English Mortality Assigned to Alcoholism.

There are few branches of statistics in which it is more necessary to observe caution than in basing conclusions upon statistics of the causes of mortality. The necessity for this caution should not, however, deter us from discussing the true import of mortality statistics presented to us in the reports of the Registrar-General. It is needless to point out to those whose duty it is to certify causes of death "to the best of their knowledge and belief" the serious difficulties that surround the certification of death to which an excessive use of alcohol has more or less directly contributed. Under these circumstances it would be useless to expect a near approach to actual accuracy in the statistics of deaths assigned to alcoholism. The Registrar-General's figures on this subject, however, deserve consideration. The recently issued annual report shows the annual rate of mortality assigned to chronic alcoholism in England and Wales in each of the twenty years 1875–94. The recorded annual rate per million persons living from this cause has shown a remarkably steady increase during this period. The actual lowest rate in these twenty years was 26 per million in 1880, and the highest was 57 per million in 1893. In the first four years of this period, 1875–78, the annual rate averaged only 29 per million, while in the last four years, 1891–94, the recorded rate averaged 52 per million, showing an increase of 79 per cent. Can these figures mean that the death-rate from alcoholism has nearly doubled in the twenty years? Or are they to be explained by the more accurate and courageous certification of the cause of deaths due to alcoholic excess? There has been undoubtedly a very considerable decline in the proportion of deaths attributed to diseases of the liver during the last twenty years, and we know that the Registrar-General now addresses to certifying practitioners a steadily increasing number of inquiries concerning ambiguous certificates, but it is difficult to avoid the conclusion suggested by the figures noted above, that they imply, at any rate, some real increase in the death-rate from alcoholism. The figures bearing upon the recorded death-rate from this cause among males and females are interesting, and to a certain extent more trustworthy, as there appears to be no reason why the probable increase of accuracy in certifying this cause of death should affect the recorded death-rate of one sex more than another. The death-rate of males from alcoholism increased from 38 per million in 1875–78 to 60 per million in 1891–94; among females the rate increased in the same periods from 20 per million to 46 per million. Thus the increase in the recorded rate was equal to 58 per cent. among males and to no less than 130 per cent. among females. It is therefere impossible to avoid the conclusion that, whatever may be the actual increase in the death-rate from intemperance implied by the Registrar-General's statistics, the increase must have been relatively far greater among females than among males. It should be stated that the deaths referred to "delirium tremens" are not included under the heading "chronic alcoholism" and that the death-rate from this cause remained practically stationary during the twenty years.—*London Lancet.*

Death Under Chloroform at a Dentist's Rooms.

In the Report of *The Lancet* Commission appointed to investigate the subject of the Administration of Chloroform and other Anæsthetics from a Clinical Standpoint* attention was drawn to the alarming number of deaths under chloroform which have occurred while dental operations were in progress. It is matter of no small regret that dental practitioners should not be better informed upon these matters than to permit the employment of chloroform upon their premises as an anæsthetic. There is ready to hand a safe and convenient anæsthetic in nitrous oxide gas, which fulfils all the requirements of the dentist, and this

*The *Lancet*, March 18 and 25, April 1, 15 and 22, May 6 and 20, and June 17, 1893.

anæsthetic should in dental cases be resorted to rather than chloroform. Had this been done in the case given below there is little doubt that a valuable life might have been spared. A youth, aged fifteen, required eleven teeth to be taken out to qualify him for admission into the Royal Navy. An appointment was made by a dentist with the youth's own medical man to give chloroform. We do not wish to pillory this particular gentleman, with whom we deeply sympathize, for the terrible disaster with which he is associated; we are aware that very many practitionersadop t the plan he resorted to, and recognize it as a routine procedure in dental operations. We must, however, most emphatically denounce it as a dangerous and undesirable one. Chloroform was administered with a towel—a method which easily induces an overdose of the anæsthetic—and the pulse was kept under observation. We read nothing of the respiration or the pupil, though doubtless they, too, were kept under observation. The dentist removed one tooth and finding the second somewhat difficult some delay arose, during which the boy partly came round. The chloroform was readministered and the remaining teeth were removed. Then the patient died. In a report which is before us we read that the medical man in his evidence said, "Turning round again he noticed a change in the patient's condition." It is significant how often "going wrong" occurs when the back is turned. The necropsy—performed by an independent medical man—revealed, we are informed, the startling fact that on examination of this boy, who is described as being in "perfect health" and as having been passed for the Royal Navy at headquarters except as regarded his teeth, that his lungs were in such a condition that "the boy could not have lived above two years." Surely no lesion so serious could have escaped the examination at headquarters and that of the medical man who expressly states he scrutinized the lad before giving the chloroform. The posture of the patient is not mentioned; probably the boy was in a dentist's chair—a position of body unsuited for the administration of chloroform.—*London Lancet.*

Anti-Typhoid Serum.

In the course of a communication to the *Paris Societe de Biologie*, on February 22d, on the "Early Diagnosis of Typhoid Fever by a Bacteriological Examination of the Stools," M. Chantemesse said that last June he had succeeded in immunising several horses against the virus of typhoid fever. He had obtained the serum of such strength that one-fifth of a drop inoculated into a guinea-pig twenty-four hours before infection protected it against a dose of typhoid virus fatal to animals not previously injected with the protective serum. It was ascertained, also, that injections of the serum produced no injurious effects upon a healthy man. M. Chantemesse stated that he had since employed injections of serum in three cases of typhoid fever. The temperature showed a regular fall from the time the first injection was made, and seven days after the commencement of the injections all three patients were quite free from fever, and had commenced to convalesce. M. Chantemesse added that the cases were not yet sufficiently numerous to permit any trustworthy conclusion to be drawn.

NEWS AND MISCELLANY.

The Value and Desirability of Literary Contributions from General Practice.

It is a singular, but universally observed fact, that the overwhelming majority of literary contributions to medical journals emanate from the larger cities and that this is not a relative, but an absolute majority. The principal reason for such a phenomenon is, undoubtedly, that the facilities for specialistic studies are, as a rule, greater in the city than in country districts or smaller towns. Specialists are usually more prolific writers than general practitioners in large cities as well as in smaller towns. They have more leisure and opportunities to write, and the habit of writing, once formed, is more apt to be kept up than where it is practiced at longer intervals. It would appear, however, that there really is more interesting material at the disposal of the general practitioners which is worthy of being treated in a scientific article, than the comparative dearth of original articles on the part of our colleagues in smaller towns and the country, seems to indicate. Some of the most highly educated physicians are practicing in smaller towns. Their observations and literary contributions are valuable to their colleagues and will increase in no small measure the authors' reputation and prestige.

The practice in the country has peculiarities and attractions of its own, the careful study of which are as valuable as that of any subject within the limits of a more narrowly circumscribed specialty. The influence of the topographical conditions of certain territories upon health and disease, of the humidity or dryness of the soil, of the rational hygiene of dwellings and of meteorological conditions, peculiar to country districts—all of these appear to offer a prolific source for original thought and investigation in which the general interest would be equal, at least, to any observation in other fields of practice, while the chemical, physical, microscopical and bacteriological examinations should be at the disposal of country practitioners in the same degree as of their colleagues in the large cities.

By exploiting scientifically every opportunity for careful observation, the general practitioner becomes, in reality, a specialist in his sphere of activity, and his remuneration should be equal to that of any representative of the so-called recognized specialties.

It seems that it ought to be possible for the well educated country practitioner to sooner or later mould his own surroundings with regard to the range of his scientific observations. That, on the other hand, overwork and insufficient remuneration may, in some instances, be an obstacle in the materialization of such ideals, we do not doubt. But we believe that the intelligent practitioner will find abundant opportunities to enlighten his city colleagues on experiences peculiar to country practice which will be interesting, instructive, and much appreciated.

More abundant literary contributions, then, from our colleagues in the smaller towns and country districts in this and other States will be warmly welcomed by their city confreres, and we take advantage of this opportunity in encouraging and requesting our numerous subscribers who are engaged in general practice in or outside of the larger cities to carefully note their observations and, instead of hiding their lights under the bushel, to contribute more frequently to the pages of the REPORTER. We would remind them, finally, that such men as Ephraim McDowell, Koch and many others who have astonished and revolutionized the medical world by their originality and genius, were modest and unassuming country practitioners.

American Medical Association, Atlanta, Ga., May 5th to 9th, 1896.

Section on State Medicine.

The Section on State Medicine will meet in Room 15, Kimball House.

Officers of Section:—Charles H. Shepard, Brooklyn, Chairman; Elmer Lee, Chicago, Secretary; Executive Committee—L. H. Montgomery, Chicago; G. W. Stoner, Baltimore; C. A. Lindsley, New Haven.

TUESDAY, MAY 5.

1. The State Care of Physically Defective Classes—Wm. E. Wirt, Cleveland, Ohio.
2. The Sanitary Control of Small-pox—S. L. Tepson, Wheeliny, Va.
3. Preventive Medicine in Apoplexy—Ephraim Cutter, New York City.
4. Heredity as a Social Burden—A. W. Wilmarth, Norristown, Pa.
5. Hygiene versus Drugs—C. F. Ulrich, Wheeling, W. Va.
6. The Prevention of Small-pox—Elmer Lee, Chicago.
7. Drugs versus Animal Viruses as Prophylactics—Reginald B. Leach, Paris, Texas.
8. A Plea for the Domestic Destruction of Garbage—N. E. Wordin, Bridgeport, Conn.
9. The Welfare of the Community Demands that Marriage Should be Regulated—Daniel R. Brower, Chicago.
10. Age and Sex Incidence of Mortality in Michigan, from Diphtheria and Croup, During Twenty-five years, from 1870 to 1894; a Statistical Study—Cressy Wilbur, Lansing, Mich.
11. The Prophylaxis of Functional Nervous Diseases—John Punton, Kansas City, Mo.
12. A New Treatment of Phthisis—H. W. Mitchell, New York.
13. Pure Water—Frank W. Epley, New Richmond, Wis.
14. The Evil Results of Overstudy in the Young—Thornton Parker, Groveland, Mass.
15. Treatment of Insanity—S. V. Clevenger, Chicago.
16. Prevention of Infectious Diseases—J. M. G. Carter, Waukegan, Ill.
17. The Prophylaxis of Typhoid Fever—John Eliot Woodbridge, Cleveland, Ohio.

WEDNESDAY, MAY 6.

18. Physicians as Pauperizing Agents; a Review of Some Neglected Points in State Medicine—Douglas H. Stewart, New York. To be read by Dr. Manley.
19. The Turkish Bath, etc.—Forbes Winslow, London, England.
20. The Therapeutic Action of the Turkish Bath—V. Tagellski, London, England.
21. The Need of Public Baths—Charles H. Shepard, Brooklyn, N. Y.
22. The Prevention of War and the Promotion of Peace in Relation to State Medicine—Edward Davies McDaniel, Mobile, Ala.
23. Health Boards as Disturbers of the Peace—Charles McIntire, Easton, Pa.
24. The Inadequacy of Public Hygiene as a Means of Preventing National Physical Decay—J. H. Kellogg, Battle Creek, Mich.
25. The Physician's Duty to the General Public—J. W. Cokenower, Des Moines, Iowa.
26. Health Departments of Large Cities and their Organization—John B. Hamilton, Chicago.
27. The Methods of Drainage Now Prevailing in Some of Our Eastern Seaboard Municipalities Tending to the Production and Dissemination of Disease—Augustus P. Clark, Cambridge, Mass.
28. A Department or a Bureau of Health? Which? S. S. Herrick, San Francisco.
29. Some Thoughts Relative to a National Department of Public Health—F. E. Stewart, Detroit, Mich.
30. Progress in State Medicine in Pennsylvania—E. O. Bardwell, Emporium, Pa.
31. Should the State Provide Hospitals for the Treatment of Tubercular Patients? J. S. Jenkins, Tecumseh, Mich.
32. Serum Therapy in Some Diseases—G. T. Vaughn, P. A. Surgeon, M. H. S., Philadelphia.
33. Suicide: Three Cases, with Remarks—John L. Davis, Cincinnati, Ohio.

THURSDAY, MAY 7.

34. State Prevention and Cure of Inebriety—O. Evarts, College Hill, Ohio.
35. The Abuse of Alcoholic Drinks, its Relation to Public Health and Its Prevention—W. Bayard, St. Johns, New Brunswick.
36. Recent Studies Relating to the Toxic Effect of Alcohol upon the Nerve Cells—W. H. Riley, Battle Creek, Mich.

37. The Non-alcoholic Treatment of Consumption—O. G. Place, Boulder, Colo.
38. Hospital Management Without the Therapeutic Use of Alcohol—Sarah Hackett Stevenson, Chicago.
39. Twenty-one years' experience in the Non-Alcoholic Treatment of Disease—J. H. Kellogg, Battle Creek, Mich.
40. What Constitutes True Clinical Experience in Medical Practice and its Relations to the Public Health—N. S. Davis, Chicago.
41. The Evolution of Medical Opinion as to Alcohol and Other Narcotics—I. N. Quimby, Jersey City, N. J.
42. The Proposed Permanent Badge for the AMERICAN MEDICAL ASSOCIATION — R. French Stone, Indianapolis, Ind.
43. Tuberculosis, Infection from Food—Charles E. Winslow, Los Angeles, Cal.
44. Modern Respiratory Advantages—W. T. English, Pittsburg, Pa.

Papers have also been promised by the following: T. D. Crothers, Hartford, Conn.; A. B. Judson, New York; W. T. English, Pittsburg, Pa.; C. H. Hughes, St. Louis, Mo.; G. F. Cook, Oxford, Ohio; Charles Winslow, Los Angeles, Cal.; G. E. Martin, Carthage, S. Dakota; Charles S. Sheldon, Madison, Wis.

Medical Conventions, 1896.

Physicians and others attending the various Medical Conventions for 1896 should bear in mind that the B. & O. offers special inducements to conventions of this kind. The scenic attractions of this route are unsurpassed in this country. All B. & O. trains between the east and west run via Washington, and sufficient time limit is given on tickets to allow a stop-over at the National Capital.

The meeting of the Amer. Assoc. Genito-Urin. Sur. will be held at Atlantic City, first week in June.
The meeting of the Amer. Gynecol. Soc., in New York, May 26.
The meeting of the Amer. Laryngol. Asso., in Pittsburg, early in May.
The meeting of the Asso. Mil. Sur. of U. S., in Phila., May 12, 13 and 14.
The meeting of the Climato. Asso., Lakewood, N. J., May 12 and 13.

For rates and other information, address Chas. O. Scull, General Passenger Agent, Baltimore, Md., or L. S. Allen, A. G. P. A., Chicago, Ill.

The regular meeting of the "North West Medical Society" was held at Friendship Hall, 16th and Columbia Avenue, Tuesday evening, April 14th, 1896, at 8.30 o'clock. The following papers were read:

"Diagnosis of Pregnancy by the change in the Microscopic Appearance of the Urinary Phosphates," by Dr. W. E. Parke.
"Nasal Syphilis with Extensive Lesions, report of a Case," by Dr. Louis Sommers.
"Uric Acid Diathesis," by Dr. Frank Massey.
Dr. W. H. Noble showed cases of "Restoration of Saddle Noses."
Dr. I. Leopold reported a case of "Melano-Sarcoma of the Iris."
"Do Certain Questions and Symptoms aid or lead astray in the Diagnosis of Syphilitic Skin Affections?" by Dr. A. Cantrell.
Dr. E. J. Stout reported "Five Cases of Labial Chancre."
"A Case of Osteitis Deformans and Exhibition of the Skull Cap," by Dr. Chas. Hermisch.

VICTOR T. ROTH, M.D.,
Secretary.

The Trustees of Jefferson Medical College have just purchased the properties at the northwest corner of Tenth and Walnut Streets; 118 feet 6 inches on Walnut Street, by 107 feet 5 inches on Tenth Street, to Medical Street.

Upon this site they intend erecting the most complete hospital building in the country, and upon the site now occupied by the college a structure corresponding as to exterior appearance, for college purposes.

Plans for these new buildings are now being prepared by Architect Windrim, of Philadelphia.

A meeeting of Jefferson graduates was held at the Penn Club, Wednesday evening, April 8th, for the purpose of raising money to assist the Trustees of Jefferson Medical College, in the equipment of the new Laboratory of Pathology and Bacteriology, of that institution.

The result of the meeting was $10,000 subscribed. One-half of this sum was raised at the meeting.

The new laboratory will be under the direct supervision of the Chair of Pathology, which will be filled by Professor Coplin, now of Vanderbilt University, Tennessee.

Dr. Francis T. Bond, the medical officer of health for the Gloucestershire combined district, is very actively engaged in endeavoring to disseminate a knowledge of the benefits of vaccination amongst a community that has of recent years lent a too ready ear to its opponents. We have already mentioned his leaflet entitled "Fifteen Reasons why we should believe in the Efficacy of Vaccination as a Preventive of Small-Pox," which has set many people thinking. Dr. Bond has followed this up by other writings advocating the formation of a society to be called "The Jenner Society," to promote the diffusion of knowledge of the history of small pox and the value of vaccination as a preventive against it; to promote legislation to put vaccination on a more satisfactory basis; to improve the practice of vaccination, and generally to facilitate the adoption of analogous methods of preventive and curative medicine. We cordially wish success to this movement, which is fittingly initiated in the county identified with Jenner's work 100 years ago.